MAR 14 1957

MARCH 1957

FIREMEN

SIXTY-FIRST YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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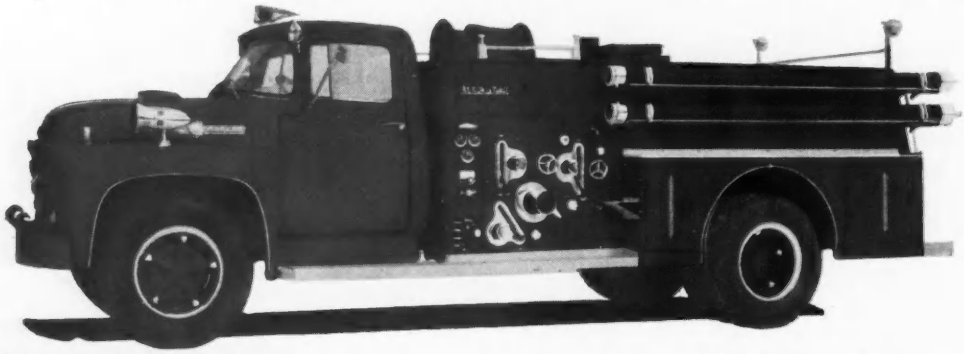
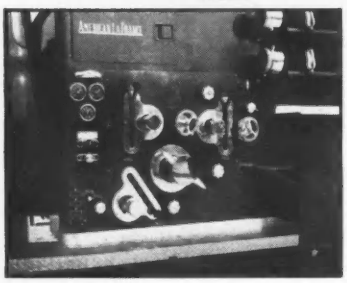
Now AMERICAN LAFRANCE "Series 800"

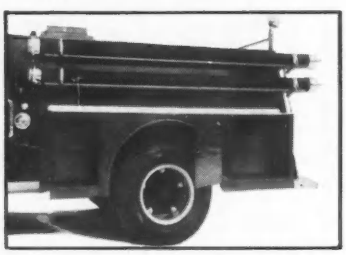
Fire Fighting Equipment . . . on your preferred Commercial Chassis



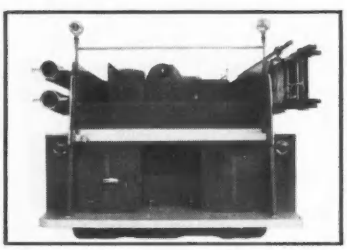
750 g.p.m. Class A TWINFLOW Pump. 500 gallon water tank. 2½" gated suction inlet is optional extra.



Pump controls are accessible and labeled for quick operation.



Four large compartments, two each side, for any type mask or resuscitator.



Two rear compartments will house generator and portable pump. Water tank shown is 500 gal. capacity with hose bed divider for 1½ inch hose.

The same important features and quality construction as in AMERICAN LAFRANCE custom-built fire engines . . .

Hose body increased in width to 73 inches for more hose capacity. 1900 feet, 2½ inch hose with 300 gallon water tank, or 1600 feet of 2½ inch hose with 500 gallon water tank.

Water tanks are available in 300 gal. (std.), 500 gal., 750 gal., or 1000 gal. capacity at your option with selected chassis of proper g.v.w. rating. All have removable covers; deep outlet sump; large screened fill opening; large vent for hydrant line filling; full Zincilate treatment for protection against corrosion.

The TWINFLOW pump is parallel-series, 2-stage centrifugal with Class A, N.B.F.U. rating for 500 g.p.m. or 750 g.p.m. Bronze impellers; bronze seal rings; stainless steel, hardened, impeller shaft. Positive operating transfer valve; cooling for pump transmission; dependable priming; relief valve for pressure control.

There are nine equipment compartments; seven are of enclosed type for weather protection. Equipment storage space for your portable generator, portable pump, gas masks, radio, tools, and other equipment.

• *Ask our representative for more information about all the important features of these NEW Fire Engines.*

AMERICAN LAFRANCE CORPORATION

ELMIRA, NEW YORK, U. S. A.

LAFRANCE FIRE ENGINE—FOAMITE LIMITED

TORONTO, 9, ONTARIO, CANADA

Let's talk frankly about mildew

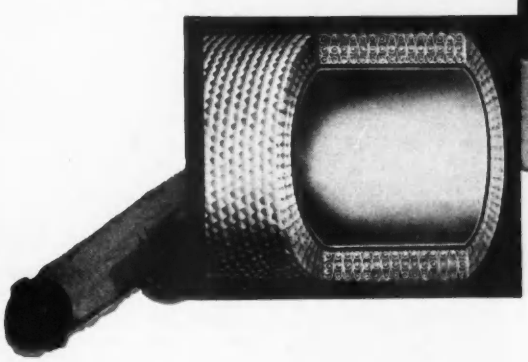
Fire hose manufacturers have various "treatments" which they apply to their hose to render it mildew resistant.

So does Eureka . . . and we believe that ours is second to none!

BUT our more than 80 years' experience in the manufacture of the highest-quality municipal fire hose has convinced us that the *only sure way to prevent mildew* in fire hose is to *dry it thoroughly* every time it gets wet. Don't overlook even a light shower or stray spray at a fire which may dampen the unused hose in the truck bed.

It is just as important to keep hose *dry* as it is to keep it *clean*. "Treatment" doesn't take the place of good care in prolonging hose life. At best, it provides mildew *resistance*, not prevention! Such treatment may not *wash out*, but normal abrasion might *wear through* it. So play safe! KEEP YOUR HOSE DRY!

We sincerely hope that this frank word of caution will substitute for costly experience in many fire departments . . . particularly in financially-pressed volunteer companies! Naturally we'll be happy to hear from you if you have anything to add on this subject.



Note how criss-crossing vertical cords tie all plies into a single jacket.

"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Rubber-Lined Fire Hose

1 Market Street • Passaic, New Jersey *Division of* **United States Rubber**

Increase your fire-fighting efficiency and safety with pr

M.S.A. MASKFONE

Self-contained communication system between two mask wearers or a wearer and a remote control point. No batteries or external power needed. Clear, crisp voice communication aids fire-fighting efforts by permitting instant relay of instructions, warnings. Write for details.

M.S.A. "ALL-SERVICE" MASK®

For fire-fighting efforts in air contaminated with smoke and gas, but where sufficient oxygen is present to support life, the "All-Service" Mask assures dependable breathing protection to the wearer. Available with the M.S.A. "Cleartone" Speaking Diaphragm for clear speech transmittal. Write for details.

M.S.A. PNEOLATOR

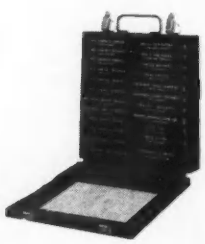
Assures maximum chances of recovery in all cases of arrested breathing. Provides oxygen at the preselected amount and pressure. There is no suction cycle—exhalation takes place by the normal passive return of respiratory muscles. Portable, rugged carrying case. Write for complete details.

M.S.A. STREAMLINED FIREMAN'S HELMET

Meets all requirements for fire-fighting hats—molded laminated plastic takes bumps and blows, withstands water, oil, heat, provides high dielectric strength. Streamlined design adds eye-appeal; shields are of tough, full-grained leather; winter lining zips in quickly. Write for details.

M.S.A. FOILLE SPRAY KIT

This kit is supplied with four aerosol sprays for quick, effective application to burned areas to ease pain and aid in the control of shock. Aerosol application is fast, effective, always ready. Kit also contains a complete assortment of first aid dressings and accessories. All units are assembled in a weather-proof steel case. Write for details.



M.S.A. FIRST AID KIT

Designed to meet all the requirements of fire department service. Contents of the M.S.A. Kit are individually wrapped in cellophane to protect against dirt, dust and moisture. All-weather steel case design provides an added safeguard. A complete supply of emergency treatment for immediate application is contained in unit packages for quick location, individual treatment. Write for details.

M.S.A. EXPLOSIMETER®

A compact, portable, easy-to-use instrument for checking suspected areas for explosive gases and vapors during fires and in general survey work. Body carrying straps, and one hand operation permit unhampered use. Easily read dial, rugged, simple to maintain. Write for details.

M.S.A. FLOOD LAMP

Safe in gaseous atmospheres, this lamp combines brilliant, unfailing illumination with easy portability. Equipped with standard Edison Batteries in magnetically-locked steel container. Lamp housing is water and dustproof. Write for details.

Call the M.S.A. man

on your safety problem

. . . his job is to help you

SAFETY EQUIPMENT HEADQUARTERS

MSA

proved M·S·A equipment

M·S·A CHEMOX®

This unit provides complete breathing protection for fire-fighters in oxygen-deficient or unbreathable atmospheres. Pure oxygen, released from the replaceable chemical canister the instant the wearer breathes, continues automatically in accordance with the breathing demands. This protection is provided for a minimum of 45 minutes under rugged working conditions.

The Chemox is light—only 13½ pounds. It is comfortable, designed for freedom of movement. The canisters can be stored indefinitely—are always ready. M. S. A. "Cleartone" Speaking Diaphragm, which permits clear communication between mask wearers, is standard equipment. Write for details.

M·S·A AIR-MASK

... available with AIR or OXYGEN

This unit, designed to bring respiratory protection and comfort to users in unbreathable atmospheres, supplies air or oxygen in exact accordance with breathing needs. During exhalation, the flow ceases—an economy measure that greatly lengthens service life.

Here are a few of the construction details—

- ... large, well-defined figures on pressure gauge for easy reading.
- ... the high pressure hose is made of wire-inserted neoprene for increased wear.
- ... the redesigned cylinder valve connects directly to the cylinder and the improved working parts of the valve provide greater serviceability and less maintenance.
- ... the nylon harness is easily adjusted and provides maximum strength. It is highly chemical and water-resistant.
- ... the new color scheme is an attractive dark green and yellow. This striking appearance makes it easier to spot men in working areas. Write for details.

MINE SAFETY APPLIANCES COMPANY

201 North Braddock Avenue, Pittsburgh 8, Pa.

At Your Service: 76 Branch Offices in the United States

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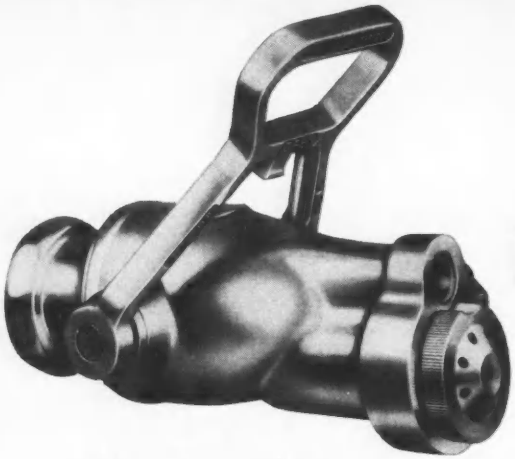
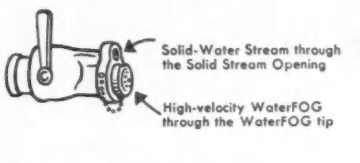
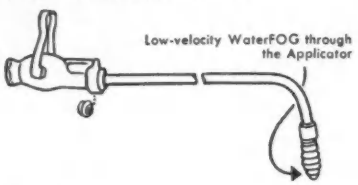


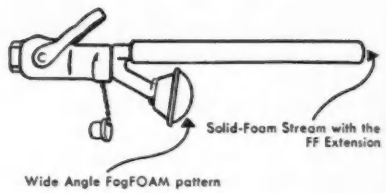
Rockwood SG-60 WaterFOG Nozzle is five nozzles in one

The lightweight Rockwood SG-60 WaterFOG Nozzle *eliminates "special" or single-purpose nozzles!* It actually does the work of five nozzles to put out fires faster, safer and more economically.

Here's what we mean . . .

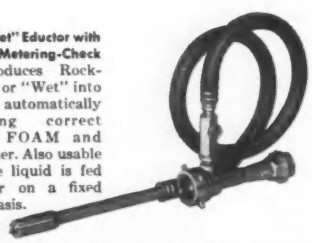


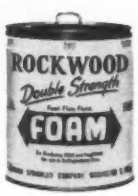




Here's what you need to put out ordinary combustibles and flammable liquids . . .

FOAM and "Wet" Eductor with the new FW Metering-Check Valve. Introduces Rockwood FOAM or "Wet" into hose lines, automatically proportioning correct amount of FOAM and "Wet" to water. Also usable wherever one liquid is fed into another on a fixed percentage basis.



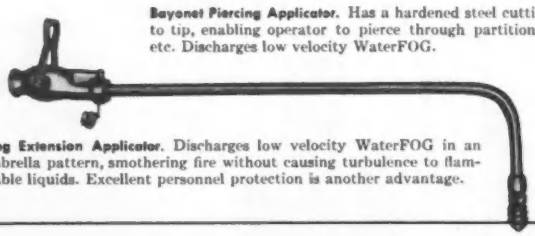


Rockwood Double Strength FOAM. Puts out fires in flammable liquids, and in ordinary combustibles, quicker, at lower cost. Three parts FOAM and 97 parts water create a heat-resistant blanket.

Rockwood WET. One part WET mixed with 99 parts water increases water's penetration and extinguishing action. Gives quickest results against deep seated fires. Saves time, water, manpower.

FF Extension Unit. Shown with Type SG-60 Nozzle. Discharges Rockwood FOAM in a solid stream or as FogFOAM. Wide angle makes it possible to cover large areas at one time.

Bayonet Piercing Applicator. Has a hardened steel cutting tool attached to tip, enabling operator to pierce through partitions, into interiors, etc. Discharges low velocity WaterFOG.



Long Extension Applicator. Discharges low velocity WaterFOG in an umbrella pattern, smothering fire without causing turbulence to flammable liquids. Excellent personnel protection is another advantage.

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

Distributors in all principal industrial areas

and here's the way to get more information

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
1530 Harlow Street
Worcester 5, Massachusetts

Please send me your illustrated booklet on Rockwood fire-fighting products.

Name .....
Title .....
Company .....
Street .....
City .....
Zone ..... *State* .....

• • • Seagrave Pump mounted deep in frame

lower center of gravity for greater SAFETY!

The mounting of the Seagrave All Bronze Centrifugal Pump low in the frame (not on it) conserves body space, simplifies the pump drive to only two gears for transmission and keeps the center of gravity low for greatest safety.

Seagrave produced America's original Centrifugal Pump for fire service and has been building this type of pump for almost fifty years.

This is the only pump of its kind with Hydraulically Operated Parallel-Series Valve (A Seagrave patent). It can be shifted from parallel to series operation (volume to pressure) regardless of engine speed or pump pressure. No complicated hand cranks or electric connections. Operation actuated by pressure within the pump.

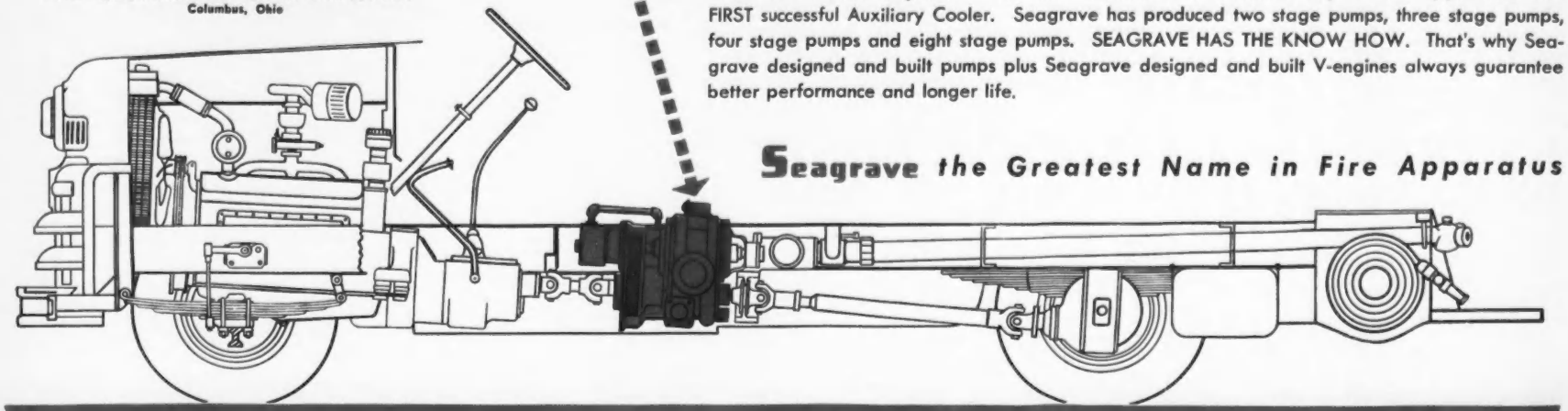
Discharge valves may be quickly locked in any position.

The Seagrave Centrifugal has a positive eccentric-vane type vacuum pump which has been pre-tested on a mercury column. No priming device can exceed its efficiency and performance.

Another outstanding feature is the famous Seagrave Pressure Regulator which automatically controls engine speed to the proper point and under all pumping conditions.

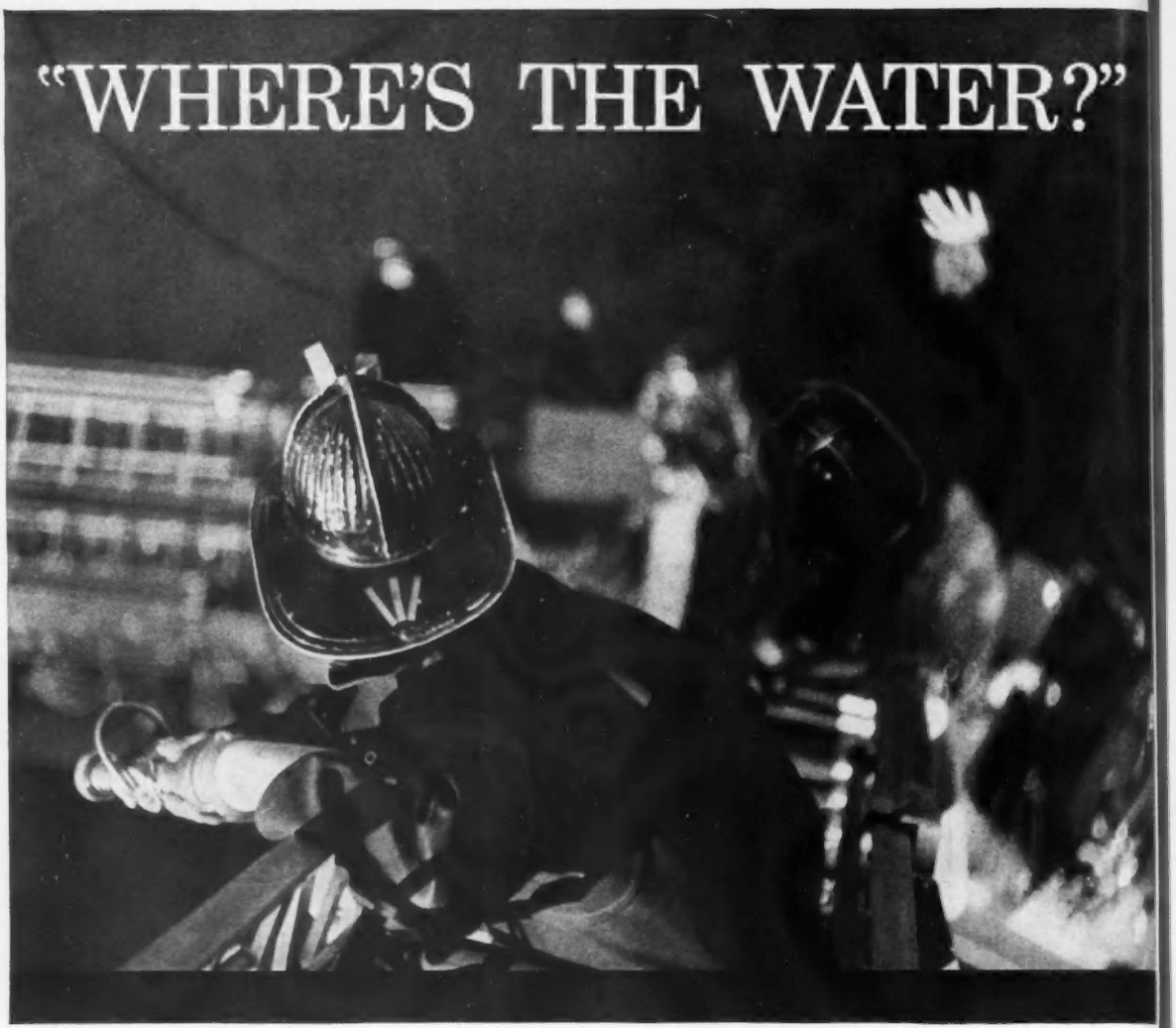
THE SEAGRAVE CORPORATION
Columbus, Ohio

Seagrave produced the FIRST Centrifugal Pumping Engine in the United States. The FIRST Automatic Pressure Regulator. The FIRST Eccentric Vane Vacuum Pump for fire apparatus. The FIRST successful Auxiliary Cooler. Seagrave has produced two stage pumps, three stage pumps, four stage pumps and eight stage pumps. SEAGRAVE HAS THE KNOW HOW. That's why Seagrave designed and built pumps plus Seagrave designed and built V-engines always guarantee better performance and longer life.



Seagrave *the Greatest Name in Fire Apparatus*

"WHERE'S THE WATER?"



safe, sure, fast under all conditions . . new Waterous *Electro-Matic pump

Now, power controls meet every pumping requirement with speed and accuracy you can always count on. The Electro-Matic is the *first* fire pump to offer power operation for all major pump controls—shift, primer, discharge and transfer valves. This means less chance for error and fast, sure action. For example, Electro-Matic's Transfer Valve is controlled by a simple "Volume", "Pressure" switch. Changing operation is simple, swift and smooth, without pressure "shock" so dangerous to firemen. Electro-Matic also features a new design that reduces weight, takes much less space and offers extreme mounting flexibility. Waterways and impellers have been newly engineered for even greater performance under a wider range of conditions. All this in addition to famous Waterous dependability. Send for FREE Booklet that gives complete details.

Pat. Pend.

DEPT. 202

WATEROUS *Electro-Matic*

80 E. Fillmore Ave., St. Paul, Minn.

*Registration applied for.

Electro-Matic Model CM, 750 GPM, Class A. 500, 1000 GPM, 2 or 3-stage models available.

NEW DURA-FOG NOZZLE by POWHATAN

NAMED FOR ITS DURABILITY

Rubber Bumper for Protection and Non-Slip Grip
Selected Stream by Sight or Touch
Clicks into Straight Stream or Desired Fog Pattern
Floating Gland Type Shut-Off
Shock Absorbent Shut-Off Mechanism
OPEN
Sure Grip Base
POWHATAN
Sturdy Handle

PLATE No. 261

NO LEAK in over a million shut-offs . . . test proof of durability!

100% PERFORMANCE TEST for every Dura-Fog Nozzle!

Performance Test Data for 1½" Size

Water Pattern	GPM	Reach	Nozzle Pressure
STRAIGHT STREAM	57 62	85′ 105′	100 psi 125 psi
30° FOG PATTERN	60 65	40′ 43′	100 psi 125 psi
60° FOG PATTERN	65 68	30′ 35′	100 psi 125 psi
90° FOG PATTERN	72 75	20′ 22′	100 psi 125 psi

Contact your local distributor today, write POWHATAN direct for all the facts on the new Dura-Fog Nozzle. . . . Ask for our free Catalog "A".

POWHATAN BRASS & IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia · Established 1892

Hit the Mark with INDIAN FIRE PUMPS!

Aim toward faster, more efficient fire fighting with back-pack INDIANS . . . the all 'round, clear water extinguishers with hundreds of uses. No upkeep cost. No chemicals to buy. Read what this fire chief says:

"We consider Indian Fire Pumps one of the most important pieces of equipment in our company. Just two days ago we saved a Dry Goods store and several other buildings with small water damage by using Indians.

Indians play a large part in extinguishing many of our fires and we intend to get more in the near future."

J. S. Williams

NO. 80 INDIAN LEVER TYPE Pump and Handle

Both Types Approved by Underwriters' Laboratories, Incorporated

No. 90 INDIAN SLIDING PUMP TYPE

D. B. SMITH & CO.

"FOR 70 YEARS THE LEADERS"

408 MAIN STREET, UTICA 2, N. Y.

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Firemen

Volume 24 — Number 3

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60 BATTERYMARCH ST., BOSTON 10, MASS.

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Cover Picture

On January 24, New Haven, Connecticut fire fighters responded to a telephone alarm for the fire-involved multiple tenant factory building shown on this month's cover. Even though the firemen arrived within two minutes after the alarm, a front stairway was already reported to be impassable because of heat and smoke. This factor caused some of the 120 building occupants to leave the building by a fire escape, which featured a swinging stair latched in the "up" position. Some of these persons were delayed on the fire escape long enough to be enveloped in smoke and flame which burst from a window. Altogether 15 persons died because of fire in the building and 25 were injured. Other details are on page 17 of this issue. (*Cover picture Wide World photo.*)

On Fire Extinguishers

NFPA member fire departments might be interested in the following editorial which appeared in the July, 1957 issue of "Soap and Chemical Specialties." It refers to Chief Montgomery's discussion of fire extinguishers which was published in the July, 1956, NFPA *Quarterly*.

"Manufacturers of aerosol fire extinguishers, basking in the comfortable glow of last year's production of 1.9 million units, had a few clouds painted into their otherwise blue-sky picture recently.

"Speaking before the annual meeting of the National Fire Protection Association in Boston early in June, the New England city's fire chief, Edward N. Montgomery, criticized severely many of the hand-sized, push-button fire extinguishers now on the market. . . . rapped some unidentified knuckles because of misleading claims as to the effectiveness of the aerosol fire extinguishers.

"In effect, Montgomery warned most, if not all, of the pint-sized extinguishers now on the market are being grossly oversold to the public as effective home protection. Actually, he said, they're effective protection only against a small, incipient blaze . . . not to put out a fire once it's really started, as indicated in some of the promotion.

"To back up his estimate of their effectiveness, Montgomery said some marketers, in order to demonstrate the protection offered by their small aerosol units, have sprayed lighter fluid over a small pile of paper scraps, lit the pile, and immediately put out the flames with the aerosol extinguisher. Trouble with that type of demonstration, he points out, is that the fire is never given a reasonable chance to burn . . . if it were, he maintains from trials, the aerosol extinguisher would be inadequate to cope with the fire. That test, too, is an unfair example of the usual case of emergency, for the aerosol extinguisher won't always be right at hand, or the person a fast enough thinker to grab it and go into action before the fire really has a chance to get under way.

"Gist of Montgomery's argument . . . and we go along with his thoughts . . . is that the public is apt to be led into a feeling of false security in regard to the small aerosol units.

"From a legal-economic point of view, manufacturers and marketers of the aerosol fire extinguishers had better be sure their house is in order before there's prosecution for unfair trade claims. Significant to us is the fact that Underwriters' Laboratories has not seen fit to approve any of the small aerosol extinguisher units to date."

Nursing Home Fire

As this issue of FIREMEN is going to press a member of the NFPA Staff is preparing a report on the tragic nursing home fire which occurred in Warrenton, Missouri, February 17. The report is scheduled for publication in the March issue of NFPA *Fire News*.

NFPA Annual Meeting

The 1957 Annual Meeting of the National Fire Protection Association will be held in Los Angeles, California, May 20–24. Fire department personnel in West Coast fire departments are urged to attend since there will be many timely discussions and addresses during the week which will be of particular significance to the fire service. A preliminary program will appear in NFPA *Fire News*.

Story of the

Kenmore Volunteer Fire Department

Since NFPA receives many inquiries about how volunteer fire departments are organized and operate, the editors of FIREMEN magazine are pleased to present this thorough description of an active NFPA member department. It was written by Lieutenant Donald C. Unkrich of the Kenmore Volunteer Fire Department.

CHIEF Walter E. McCreadie, Jr. and his 100 volunteer fire fighters of the Kenmore Volunteer Fire Department protect an area of about three square miles in the Village of Kenmore and Town of Tonawanda, New York. Kenmore borders on the northern boundary line of the City of Buffalo, and its department is charged directly with fire and first aid work in the Village and fire protection in certain contracted areas of Tonawanda. Within these boundaries are many types of buildings and construction; heavy and light industry, residential, mercantile, schools, public buildings, hospitals. Kenmore has a Class A fire insurance rating.

The Kenmore Volunteer Fire Department was organized in 1903 by the merging of four fire companies which had protected the area for many years with their hand drawn apparatus. In later years these companies merged into two and now the department consists of the Delaware Hook and Ladder Company and the Alert Hose Company. Each company has its own officers and separate meetings; however, for all firematic duties all members are under direction of the chiefs of the department.

The Fire Council, which consists of the chief, first and second assistant chiefs, and two wardens from each company, runs the department business. It is an unwritten tradition at Kenmore that each year the department chief is elected from a different company so that one year an Alert member is chief and the following year a Delaware will have the top office.

Each company elects a captain and lieutenant each year. For these officers, this is usually the beginning of a progression which will lead eventually to the ranks of Assistant Chief and then Chief.

Active members are divided into two groups for two separate nights of fire drill. The fire marshal and drill instructors, who are appointed from the department instruct the men in various fire fighting methods and use of tools and equipment on all the trucks.

A newly elected active member is on probation for six months and must attend two-thirds of his company meetings, two-thirds of the fire drills, and forty percent of all fire alarms during this period. New members must take a written examination for third class fireman within 18 months after joining and must take an examination for second and first class in successive years. After a member has passed the three examinations, he must pass a review examination every three years.

To be eligible for election as a chief, captain, or lieutenant, a member must have a certificate as a first class fireman from the department. Thus, he would have to be a member of the department at least three years before he could even try for election as an officer.

The drill program also consists of tours through local industrial plants by all the members on a drill night so that the situation can be "sized up" by everyone ahead of time and plans may be laid for fast and effective fire control if fire should strike.

Paid Men and Fire Code

When village officials decided in 1927 that the community needed a full time paid building inspector and fire marshal, they appointed the present chief of the department at that time, Raymond J. Kirsch, who still holds that position today. The marshal has charge of all the fire equipment, inspections, fire alarm system, and the ten paid fire truck drivers. The marshal and truck drivers are all covered by civil service.

Two paid drivers are on duty at the fire hall at all times, and under direction of the fire marshal they are responsible for maintenance of the fire hall and fire equipment and operation of the fire radio. They work eight hours a day, forty hours a week shifts, and as they are all members of the volunteer department, they must answer all fire alarms when off duty by reporting to the fire hall in case additional apparatus is needed and to take charge of the fire radio base station.

The Village Board recently adopted the National Board of Fire Underwriters' Fire Prevention Code and the marshal and deputy marshal make periodic inspections of mercantile buildings, schools, apartment houses, gas stations, industrial plants, and, upon request, private homes in order to enforce the code.

(*Below*) Apparatus and headquarters of Kenmore Volunteer Fire Department.

Alarm System

An alarm system consisting of 50 alarm boxes is spread over the Village. When a box is pulled it sounds a gong and registers on a tape at the fire hall. As soon as the box location is learned, one driver is immediately on his way with the quad while the second driver will sound the warning sirens atop the fire hall and atop the Village water tank on the other side of town to alert the volunteers. He will then set up the box number to be blown on the air horn at the fire hall to give the volunteers the exact location of the box. This number will then be blown automatically while the second driver is on his way to the fire scene with the high pressure pumper. These two trucks always respond to every box alarm. Special code numbers have also been set up for streets in fire protection districts where there are no boxes.

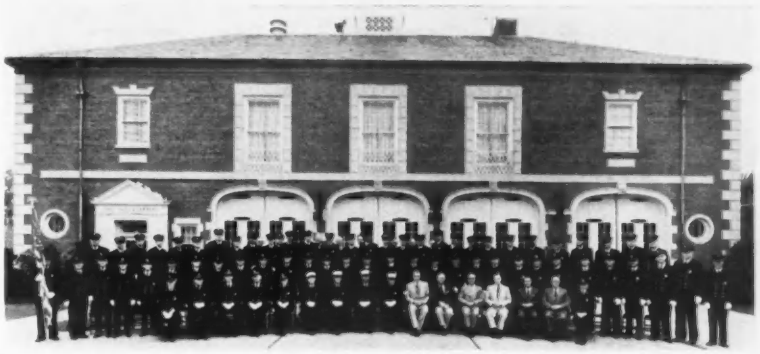
In the case of a still alarm, one driver will take a pumper while the other will telephone a number of fire fighters to report to the scene. The same setup will hold true for a first aid call. There are six squads of six men each who are on call on a rotation basis every six weeks during the evenings. Each man has attended courses of the American Red Cross and has had instructions on the operation of the two E & J inhalators and resuscitators which the department is called upon to use very often.

Equipment

The equipment includes one 1946 Ford chasis emergency truck which has tools to meet any situation, first aid kit, blankets, stretcher, ladder, Scott Air-Paks, E & J inhalator, and a Homelite generator with two 500 watt floodlights and one 250 watt spotlight.

There are two Ward-LaFrance 1,000 gal. pumpers which were purchased in 1949 and 1953. The latter is equipped with two 1-inch high pressure hose reels with fog gun nozzles and also with a foam proportioner capable of producing 5,000 gallons of foam per minute. Pickup tubes, cans of liquid foam, and foam nozzles are also carried for foam application without use of the proportioner.

A 750 gpm 1951 Ward LaFrance quad is equipped with 265 feet of ladders from a 10-ft. folding ladder to a 50-ft. extension ladder. Regardless of what company he belongs to, every member has been trained how to use equipment on all trucks.



Personnel of the Department with Mayor and Village Board on Inspection Day.

The Village provides the marshal with a late model car for use at all times which is equipped with a two way radio connected with the local police radio system.

Fire Hall

The fire hall is a large 2½-story brick building located in the center of Kenmore. There are four folding doors into the apparatus room giving each truck easy access to the street. Also on the first floor is the marshal's office, drivers' locker room, two washrooms and shower, repair shop, battery room for the fire alarm system, radio control room for operation of the Erie County fire radio base station, and the familiar brass pole for easy access to the apparatus room for firemen who may be upstairs when an alarm comes in the station.

Located in the apparatus room is the fire alarm gong, the joker, volunteers signal alarm system, an inter-com to Kenmore Police Station, and a direct telephone line to the Town of Tonawanda Fire Alarm Office because of Kenmore's fire protection districts in the Town.

The second floor has a spacious meeting room which may also be used for dances, banquets, or games. There is a pool room, recreation room, kitchen, television lounge and a ladies' lounge. In order to help with the upkeep of these rooms and pay for necessary supplies, equipment, and insurance, the department has an annual firemen's ball. This is the only fund raising event of the organization.

The basement contains a diesel engine which will cut in automatically in the event of a power failure at the fire hall and will provide electricity for the first floor and for the fire radio base station.

Fire Radio System

One of the 10 base stations of the Erie County Civil Defense Fire Radio System is located at the Kenmore Fire Hall and is operated by the drivers. This system enables all outfits in the county to commute by radio with one another in event of disaster or mutual aid operations. Through this system apparatus may be dispatched to any part of the county as directed by the county fire coordinator, and on numerous occasions Kenmore trucks have been alerted by and manned various fire stations in the City of Buffalo during multiple alarm fires there.

Each Kenmore truck is equipped to send or receive messages from the base stations or from truck to truck so that apparatus and manpower are in constant touch with the fire hall.

The fire department has a benevolent association which provides for any member who becomes sick for any length of time and also provides for a death benefit.

At Christmas time the department purchases canned food, turkeys, and fresh produce in order to assemble baskets which are delivered by the firemen to needy families in the area.

The Kenmore fire fighters take pride not only in their firematic achievements but also in their appearance at various parades and conventions. This fact has been proven by the many prizes and trophies that the department has won. The department belongs to many local, regional, and state fire organizations and also retains membership in NFPA.

Grand Award for Municipal Division entries from the United States went to Memphis, Tennessee, whose thorough FP Week activities were described in these eight neatly prepared volumes.

★ ★ ★

Winners of the 1956 FIRE PREVENTION WEEK CONTEST!

(Continued from February, 1957, FIREMEN)

★ ★ ★

Grand Award for Municipal Division entries from Canada went to Vancouver, British Columbia. A well-planned and effective FP Week campaign was amply described and verified by newspaper clippings and other evidence of thorough community coverage.

Shown on these pages are the volumes of the 1956 Fire Prevention Week Contest Grand Award winners and a summary of other successful fire prevention activities conducted by municipalities throughout the United States. It is hoped that many other fire departments and communities will adopt or improve these reported techniques and activities when preparing for next October's Fire Prevention Week.

The thousand-plus entries submitted for the past Contest varied considerably in size and thoroughness of preparation. Some obviously were prepared with the assistance of professional advertising or public relations personnel, who, perhaps, were working on a selected committee of the municipality during and after Fire Prevention Week. Others reflected the sincere hard work of capable fire department officers and men. As the survey of the entrants of each Contest is completed, it is more evident each year that fire departments' techniques of developing effective campaigns are improving.

For Contest purposes, a neat, simply prepared report allows efficient judging and also can describe FP Week activities thoroughly. Newspaper clippings, photographs, letters from business and industrial firms and from school and civic authorities are important, since they help to verify the effectiveness of the campaigns.

All of the activities summarized on the following pages were reported substantially in this manner.

Other Successful Fire Prevention Week Activities of 1956

Santa Ana, California . . . three year-old boy suffering from leukemia made honorary fire marshal for FPW; city's new junior fire department program for all fifth grades kicked off during FPW — excellent junior fire marshal and teachers' manuals divided into general fire prevention section featuring Sparky and forest fire prevention section featuring Smokey.

Pueblo, Colorado . . . made and placed fifty simulated fire alarm boxes around town during FPW; boxes had mirror inside and sign invited people to "look inside for the cause of most fires."

Kensington, Maryland . . . devoted the October issue of regular monthly bulletin for townsfolk to explaining reason for FPW and home inspections.

Cedar Rapids, Iowa . . . selected a specific hazard for a daily theme each day during FPW; played host to service clubs which held luncheon meetings at central fire station during FPW.

Cranston, Rhode Island . . . "Sparkies," members of the Sparky's Fire Department unit, policed their neighborhood for litter and trash, also checked rubbish burners.

Bethesda, Maryland . . . name of its junior fire department is "Fire Conscious Club."

Portland, Maine . . . Used Sparky puppet and large animated Sparky figure donated by insurance interests for school lectures and to promote poster and essay projects; conducted mammoth children's party at end of FPW.

Cicero, Illinois . . . Friday of FPW designated Clean-Up Day and all children organized to pile salvageable scrap and outdoor combustible litter on curbs and in alleys for one-day collection — volunteers collected and all funds realized from salvage given to city's youth programs.

East Chicago, Indiana . . . red plastic fire helmets worn by waitresses, store and bank clerks during FPW.

Winston-Salem, North Carolina . . . first person to identify mystery "Lady in Red" each day during FPW won an extinguisher.

Mount Clemens, Michigan . . . FPW theme "Sparky Comes to Life" featured fireman in paper mache mask who spoke to schools, paraded, met Smokey, tape recorded talks for town's adult groups, school groups and radio.

Harvey, Illinois . . . downtown window display showed successive steps in dressing for an alarm — sign indicated last step was arrival at "your house" and townsfolk were urged to do their best to "keep the fire department in bed."

(Right) ***Grand Award*** **in the Industrial Division went to the Milan Arsenal, The Procter & Gamble Defense Corporation, Milan, Tennessee. Entries in this division are judged on the basis of year-round fire prevention activities.**

Oshkosh, Wisconsin . . . encouraged original school projects and awarded prizes to the best; elementary school children from one school paraded through every street in their district with a "utensil" band to announce FPW.

Lexington, Kentucky . . . outfitted a 1911 Knox engine as a "mobile" fire prevention exhibition booth containing phonograph, displays, and leaflets — 50,000 people got close look at it in different locations around city during FPW.

Ponca City, Oklahoma . . . featured a clown "Nit-wit Joe — the Firemen's Foe" toured town and schools during FPW.

Salem, Massachusetts . . . the "Witch City" burned "Witch of Indifference to Fire Safety" in an FPW event; week's activities also featured Boy Scouts in Sparky masks.

Ogden, Utah . . . FPW school assemblies lectured by "Herkimer B. Careless" a ventriloquist's dummy with a voice provided by a fireman and microphone offstage.

Great Bend, Kansas . . . hot-rodders cooperated by painting FPW street signs; each school selected a red-haired "Miss Flame" and one of these reigned as town's Fire Prevention Queen; all schools during FPW visited by two firemen in Sparky masks.

Longmont, Colorado . . . radio station broadcast clues to a local fire hazard selected by the chief — person identifying "Hidden Hazard" won $100.

Merced, California . . . determined top fire cause in community to be electrical — so started inspection of electrical systems in all homes during FPW and found 90 per cent improperly fused, distributed bright sticker with correct fusing instructions to each home inspected.

Martinsville, Virginia . . . encouraged the observance of a "Greater Martinsville FPW" by aiding nearby volunteer fire companies and other suburban areas with guidance, materials, manpower and funds

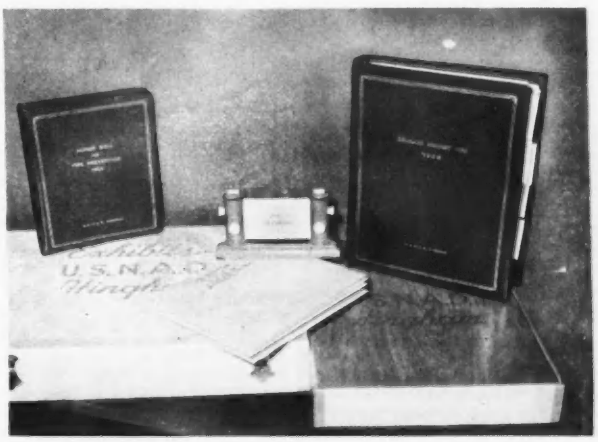
Columbus Manor, Illinois . . . inspected all homes (1,220) in town and offered special Scotchlite fuse box sticker as inducement — each householder to sign inspection sheet to verify visit.

Seaford, Delaware . . . sponsored Fire Prevention Fair in fire station one night — townsfolk viewed local business and fire safety exhibits, children given cup of punch, souvenir hat, cookies and red balloon.

Worth, Illinois . . . featured a four-hour bonfire of combustible scrap collected during FPW.

Silver Spring, Maryland . . . Junior Fire Marshals distributed literature, acted as Open House guides, and spoke in school classrooms during FPW; 20,000 visitors in one day's Open House (nearly one half of town's population).

Richland, Washington . . . Women's Club FPW project, "Operation Telephone" — 46 women made 2,132 phone calls asking "Have you thought of a way to escape from your house in case of fire?"



Grand Award **in the Military Division for U. S. Navy entries went to the Naval Ammunition Depot, Hingham, Massachusetts, which summarized its activities in these unique containers. All Military Division entries were judged on the basis of year-round fire prevention activities.**

Haverhill, Massachusetts . . . simulated fires in all schools during FPW — ladder and pumper parked nearby in each case summoned by radio when drills started. As children evacuated building, apparatus raced up and proceeded to attack fake roof fire.

Fargo, North Dakota . . . set up outdoor projection of fire prevention films for shopping crowds on evening all stores were open.

Greenfield, Massachusetts . . . put up coffin as prize to first person starting a fire carelessly during FPW; passed out 5,000 fire safety folders to motorists waiting for traffic lights during the week.

Fort Washington, Pennsylvania . . . Boy and Girl Scouts made special distribution of FPW materials to homes without children; Explorer Scouts spent day as firemen — trained, fought trash fire, cleaned apparatus, etc.

Wilmette, Illinois . . . cooperating merchants designated "Official Junior Fire Marshal Stores" and handed out junior fire marshal badge and helmet to each youngster turning in a completed home inspection blank.

Massena, New York . . . masked girl walked around town for two hours daily during FPW "Name Miss Flame" contest — person identifying girl and submitting the best four-line jingle on FPW won $25 savings bond.

Stevens Point, Wisconsin . . . furnished teachers with special background packet of FPW materials to enlist understanding and aid on home and family fire safety.

Sunnyside, Washington . . . special noontime show in center of town featured "Mr. Fire Hazard" who was captured and caged after setting fire to special privy-like structure; white flag flew over City Hall until first FPW alarm, then changed to red flag.

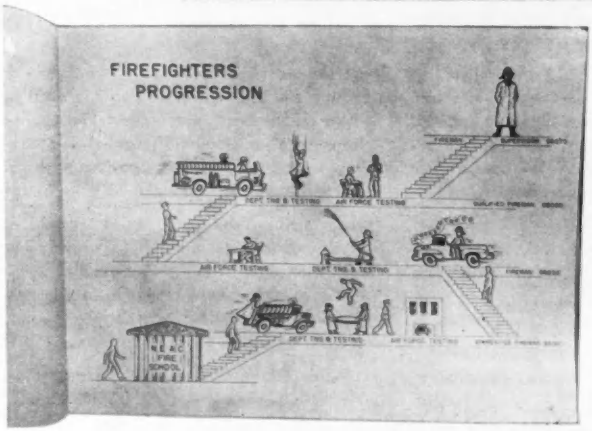
Mishawaka, Indiana . . . firemen using Sparky masks performed stunts all during FPW with another fireman dressed as "Red Devil."

Highpoint, North Carolina . . . fireman recorded radio spots for FPW and distributed them to all stations; FPW speakers at school assemblies asked questions and awarded pack of life savers to each student answering correctly (tie-in with NBFU poster).

Killeen, Texas . . . Brownies put FPW signs on parking meters; elementary school children permitted to participate in a water fight as part of FPW parade.

River Forest, Illinois . . . distributed poster reply cards for people to request home inspections — card read "I would like to take advantage of your no-cost confidential home fire inspection service. . . ."

Grand Award for U. S. Army entries in the Military Division went to The Presidio of San Francisco, California.



Grand Award for U. S. Air Force entries went to Pepperrell Air Force Base, Newfoundland.

Grand Award for Canadian Military entries went to Vancouver Wireless Station, British Columbia, Department of National Defence.

West Milwaukee, Wisconsin . . . made pre-FPW survey of all civic groups to learn how they might best cooperate in campaign; award certificates distributed for FPW cooperation; house organ editors and industrial safety directors furnished with FPW "Planning Kits" and FPW "Information Kits" went to other business and industry in town; the fire department and superintendent of schools conducted pre-FPW teacher briefings and furnished special kits for each grade level — Sparky merchandise used as prizes for school FPW projects — 1,200 students wrote personal letters to parents on significance of FPW.

Mount Vernon, Ohio . . . at halftime of a night football game during FPW, high school band, using colored lights and carbon dioxide, depicted an old steamer, then a new ladder truck, then a fuse box catching fire, flames and hose, then the letters NFPW. Narration over a public address system accompanied the movements.

Hopkinsville, Kentucky . . . leader of FPW parade was a "Mr. Filthy," a clown with a can of gasoline; followed by "Mr. Careless" in a devil's suit, who dropped matches in small gasoline spills left by "Mr. Filthy" — regular fireman in 1927 pumper would then rush up with sirens and bells and extinguish each fire. The stunt was repeated every 200 feet of the parade route.

FIRES IN THE NEWS

(Wide World Photo)

(United Press Photo)

New Haven, Connecticut, January 24. — Fifteen lives were lost when fire involved this four-story brick, wood joisted, multiple tenant factory building. The unsprinklered L-shaped building was protected by a central station connected rate of rise automatic fire detection system.

An outside fire escape stairway, accessible from windows on the three upper floors, discharged into the rear yard. Bottom section of the fire escape was a counterweighted swinging stair, lodged in the "up" position. Unlatching was to be accomplished by pushing a pivoted bar installed at waist height across the top of the swinging stair. All exits apparently were adequately marked. At the time of the fire, 120 were in the building. Sometime prior to 2:56 p.m., fire broke out in rubbish in the first story hallway adjacent to the front enclosed stairway. Fire Department Headquarters received a telephone alarm from an occupant of a building across the street and was in the process of dispatching apparatus when an alarm was received from the central station supervised fire detection system. As firemen arrived on the scene within two minutes, the front stairway was reported impassable. Most of the 120 occupants escaped by the rear interior stairway. Many tried to leave by the outside fire escape stairs. The first group of girls to leave by this route hesitated when they found the swinging stair latched in an "up" position, but with people pushing from behind, they finally ducked under the releasing bar and crawled out. In the meantime, fire and smoke burst from the first-story window enveloping the panic-stricken people. Ten of the 15 deaths and most of the 25 nonfatal injuries occurred on the fire escape. Five other persons died inside the building. A more complete report on this fire appeared in the February 1957 issue of NFPA *Fire News*.

San Francisco, California, January 9. — This three-story concrete, wood framed, multiple occupancy building was involved by fire reported to be started deliberately by an employee. After 15 or 20 minutes, a street box alarm was received at Fire Department Headquarters. Five alarm response brought 22 engine companies, 11 ladder companies, a rescue squad, and 18 other units. Loss was estimated at more than $250,000. *(San Francisco Examiner Photo)*

Saratoga Springs, New York, January 27. — Despite mutual aid response from more than 8 outlying communities, this early morning fire destroyed a block of business establishments on the main street of this community. A fire wall in a newly constructed building prevented further spread of the flames. Seven buildings were badly damaged or destroyed, and loss was estimated at more than two million dollars. *(United Press Photo)*

Earle, Arkansas, January 12. — It was estimated that fire had burned in this building for more than 45 minutes before an alarm was sent to the Earle Fire Department. Responding fire fighters found the property heavily involved, as flames spread rapidly through an open stairway and undivided attic. Fire fighters used fog nozzles effectively to protect nearby exposures. Loss was estimated at $80,000. *(E. L. Farrin Photo)*

Ladder Pipe Tests Using Junior Aerials

By Warren Y. Kimball, Manager, NFPA Fire Services Department and Editor, FIREMEN Magazine.

TESTS were conducted at the Boston, Massachusetts, Fire School, October 31, 1956 concerning the development of standard heavy streams from ladder pipes on 65-ft. junior aerial ladders. The aerial used was set for maximum stability with outrigger jacks and ground plates. The ladder was raised to a height of 55 ft. (This is the recommended maximum with this size aerial so that ample hydraulic power is available to raise the ladder, with the pipe assembly to release the dogs or pawls and permit retraction of the ladder.)

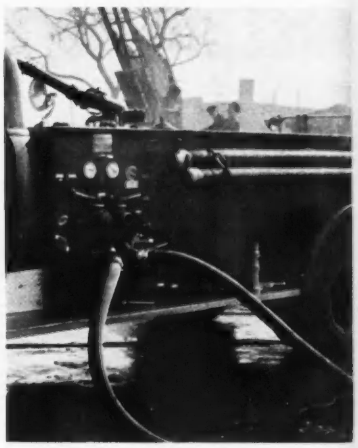
Tests were made with 500, 600, and 700 gpm solid streams from 1⅜-, 1½- and 1⅝-in. tips, and fog from a 700 gpm peripheral jet adjustable fog nozzle. The solid streams were operated at the standard 80 lbs. nozzle pressure and the fog nozzle at 100 lbs. NP set at 30 degrees for effective breakup with acceptable reach of stream.

The ladder pipe was supplied by 100 ft. of 3-in. hose fed by 2½-in. lines into a 2-way siamese equipped with clapper valves. A 1000 gpm pumper at a nearby hydrant supplied the water. A 750 gpm relay pumper at the base of the ladder was required for the 700 gpm streams, because the 2-way siamese limited delivery of required volume and pressure from the 1000 gpm pumper through 2½-in. lines.

It was determined that, where flows above 600 gpm (1½-in. tip) are to be employed, a 3-way siamese is essential, unless 3-in. hose is used, or unless a relay pumper is used at the base of the ladder to step up pressure.

The ladder pipe used was capable of handling 1000 gpm with 10 lbs. loss in the pipe. Ladder pipe losses at the flows tested were 3, 4, and 5 lbs. respectively. In other types of ladder pipes with smaller waterways, losses at these flows would have been nearer 8 to 12 lbs. requiring increased pressure at the siamese to obtain the desired nozzle pressure and volume.

A 750 gpm pumper at right receives water from 1000 gpm pumper at hydrant in center, then supplies 700 gpm through 3-in. line to ladder pipe on truck at left.



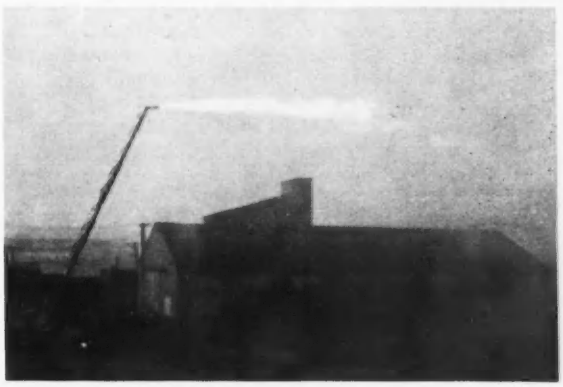
(Right) Two 3-in. lines entering relay pump through a 2½- by 2½- by 4½-in. gated siamese.

500 gpm from 1⅜-in. tip, 80 lbs. nozzle pressure, supplied by two 2½-in. lines with 128 lbs. at siamese. All tests were made with the ladder raised to 55 ft. and inclined at a 70 degree angle.

600 gpm from 1½-in. tip, 80 lbs. nozzle pressure, supplied by two 2½-in. lines with 138 lbs. at siamese. Building in background is approximately 200 ft. long.

700 gpm from 1⅝-in. tip, 80 lbs. nozzle pressure. Pump at hydrant relayed through 750 pgm pump discharging through a 100-ft., 3-in. line to ladder pipe at 150 lbs.

(Right) 700 gpm from fog nozzle, 100 lbs. nozzle pressure. The 750 gpm pump relayed water through 3-in. line to ladder pipe at 170 lbs.



Because considerable interest in the operation and supply of ladder pipes has been expressed by readers, this series of articles will be continued in coming issues of FIREMEN magazine. Last month, Washington, D.C. evolutions for obtaining full capacity from ladder pipes were described. Future articles will discuss other methods of using ladder pipes, operation of 1000 gpm streams from fly ladder pipes, and use of other heavy streams from ladder pipes.

Readers are invited to send questions or comments to the NFPA Fire Services Department.

Atomic Energy Training Program

THE United States Atomic Energy Commission announces a cooperative instructors' training program in "Fire Hazards of Atomic Industry," for the fire colleges and training schools conducted by the States and large municipalities.

The three-day course is intended to prepare instructors in such schools to integrate the hazards of the peaceful development of atomic industry into the curricula of their schools, relating the hazards of this new industry to the other hazards the firefighters face in their daily work.

The material will be presented in a simple, non-technical manner. Subjects covered will include: the distinction between internal and external radiation hazards, contamination control, the possibility of accidental nuclear explosions, associated non-radiation hazards, prefire planning, and case studies of various types of hazard situation. The course will also feature practical fire situations involving radiation hazards, using the fire training facilities available at the various schools. Each student will be provided with sufficient reference material and training aids so that he will be able, upon completion of the course, to instruct fire departments in this important subject.

There is no charge for the course. Directors of state and municipal fire schools who want their classes to receive such training during 1957 or 1958 should write prior to March 31, 1957, to Mr. Daniel F. Hayes, Chief, Safety and Fire Protection Branch, U. S. Atomic Energy Commission, Washington 25, D. C., in order that schedules may be arranged. It is expected that fire schools in the larger cities will invite instructors from nearby smaller cities to attend the classes conducted at their schools.

Francis L. Brannigan, a safety engineer on Mr. Hayes' staff, will be in direct charge. During World War II, Mr. Brannigan was in charge of a Navy Shipboard Firefighting School. After the War, as Assistant Fire Marshal of the Fifth Naval District, he organized the Navy's first Structural Firefighting School at Norfolk, Virginia. Since 1948, he has been with the Atomic Energy Commission and has served as Assistant Chief and later Chief of Safety and Fire Protection for the New York Office.

Chief Alderson's New Task

CHIEF John H. Alderson, who resigned last year as Chief of the Los Angeles, California, Fire Department, has been hired to organize the fire department in the new City of Downey in that State. Chief Alderson will set up the Department and supervise training while the City is taking over fire protection from the County. It is reported that the changing of the Department's operations should be completed in about a year.

What Size Booster Hose?

(Left and right) Flow capacities of 1-in. and ¾-in. booster hose may be evaluated by comparing the actual cross-sectional areas represented by these squares.

TWO sizes of booster hose are used by fire departments, ¾-in. and 1-in. The NFPA-IAFC Committee on Fire Department Equipment recommends the 1-in. size in Standard No. 19, "Specifications for Motor Fire Apparatus." The reason for this recommendation is that pressure loss in the 1-in. booster hose is only one-fourth the loss in ¾-in. hose, with the same flow. To put it another way, the 1-in. hose will carry more than twice as much water as the ¾-in. size at a given expenditure of pressure.

Let us see what the pressure losses are in 200 and 300 ft. booster lines with various flows. These losses are from friction in the hose only. They do not include additional pressure loss where the hose is partly coiled on the reel, or losses due to "back pressure" due to elevation. For effective low pressure fog, at least 110 lbs. must be added for nozzle pressure.

Booster Line Friction Loss in Lbs.

GPM	200 Ft. Line		300 Ft. Line	
	¾-in.	1-in.	¾-in.	1-in.
10	27	7.0	40	10.5
15	58	14.4	87	21.6
20	100	24.6	150	36.8
25	150	37.0	225	55.5
30	210	52.0	315	78.0

Now if 100 lbs. nozzle pressure is added to the above figures it is easy to see why such high pump pressures are needed when ¾-in. hose is used. Several of the so-called "high pressure fog" nozzles have approximately 30 gpm flow. It is obvious that quite a bit of pressure is used in bringing the water to the nozzle.

Take a 250 ft. reel of booster hose delivering 30 gpm. The 1-in. hose would get the same results with 200 lbs. less pump pressure. This means less likelihood of bursts and other failures such as blowing off couplings. It also means that a lighter construction hose can be used to get the same results at the nozzle. There should be less trouble with pump packing.

High pump pressures require heavier hose to withstand the pressure that is wasted trying to force water through the small diameter line.

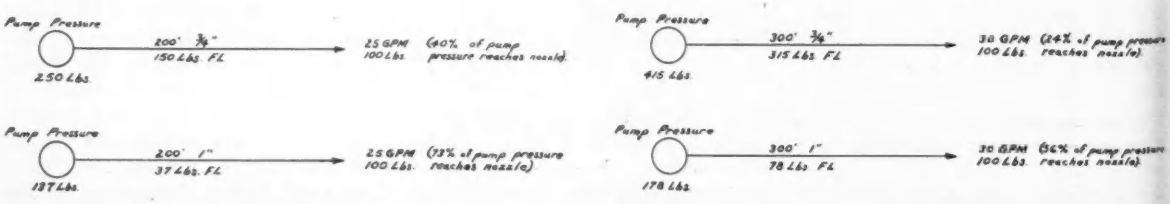
Admittedly, the ¾-in. hose may be satisfactory for very short lines supplying small delivery nozzles. The ¼-in. solid stream tip flows 18 gpm at 100 lbs. This is about the maximum that can be handled efficiently through 200 ft. of ¾-in. hose. Most adjustable type low pressure fog nozzles have considerably greater flows and about half of the "1-in." fixed pattern fog nozzles discharge 16 gpm or more at 100 lbs. Thus, if the ¾-in. hose is to be used on a conventional pump, care should be taken to select a small flow nozzle.

Let us consider the inside of the booster hose to see just how big a waterway we have to use. In other words, the internal diameter of the waterway counts, not the outside of the hose. Hose 1-in. in diameter has a cross-sectional area of .7854 sq. in. or a little more than ¾ sq. in. The cross-sectional area of the ¾-in. hose is only .44179 sq. in. In the illustration we show the internal diameters and actual areas of the two sizes of booster hose. Thus when using ¾-in. hose, you are using a line that gives less than ½-in. of waterway. It would be necessary to have a hose with internal diameter of slightly more than 1⅛-in. to get a 1-sq. in. area waterway. We show below the cross-sectional areas of standard fire hose sizes for reasons of comparison.

Internal Diameter	Area	Percentage of Next Larger Size
¾	.44179	56%
1	.7854	44%
1½	1.7671	34%
2½ (actually 2⁹⁄₁₆)	5.1573	73%
3	7.0686	73%
3½	9.6211	—

Thus, if a department is to use a ¾-in. booster line, it should choose small flow nozzles and keep lines short. If larger flows and longer lines are needed, the 1-in. booster hose is necessary. Otherwise higher pressure at the pump must be employed to overcome the pressure that will be lost in the ¾-in. hose.

The sketches below show the comparison of flows and friction loss in 200 and 300 ft. booster lines of ¾- and 1-in. size.



Advantage of 1-in. hose over ¾-in. size is illustrated in these sketches showing the large amount of pressure needed for the smaller size hose to provide flows and nozzle pressures easily obtained in the 1-in. hose.

Volunteer Fire Department Experiments with Lightweight Collapsible Tank

Pumper drafting from tank and supplying 250 gpm hose stream.

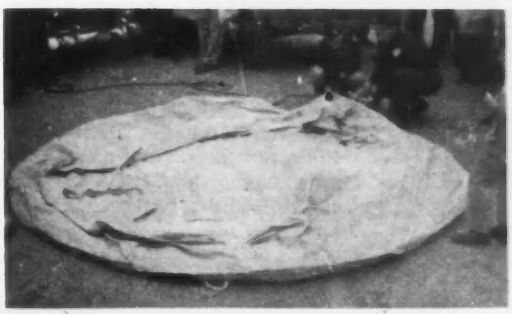
CHIEF A. Morrison Ennis of the Mortlake Volunteer Fire Company, Brooklyn, Connecticut, recently made good use of a lightweight collapsible tank as a source of water for fire fighting. The tank, made in England, is designed to hold 3,000 U.S. gallons (2,500 Imperial gallons). It is made of tough rubberized fabric which, the manufacturer claims, has a fifteen-year life expectancy.

It can be folded into a compact roll and carried in a bag by one man, since the entire kit weighs only 65 pounds. A small electric blower which operates from a 12 volt battery supply is used to pump air into the two collapsible rings. Each ring takes about one minute to inflate with this air supply. When fully inflated, the top ring is 10 feet in diameter, and the bottom ring is 12 feet in diameter, while the entire tank is 4 feet in height.

The tank was demonstrated by the Mortlake Volunteer Fire Department last Fall during a Tri-State meeting of fire departments from Massachusetts, Connecticut and Rhode Island.

Chief Ennis reports that he has maintained a 250 gpm hose stream indefinitely by using tank trucks to refill the tank periodically. Another advantage is that drafting can be accomplished while the suction hose is very close to the bottom. A special patching kit and plugs are furnished so that repairs can be made in the field although Chief Ennis says that the material shows strong resistance to rocks and other terrain impediments. Further information on the equipment may be obtained by writing to Chief Ennis, Mortlake Volunteer Fire Company, Brooklyn, Connecticut.

(Right) Chief Ennis shown carrying collapsed tank and air hose. While tank must be folded properly for insertion in bag, its light weight and compact size permit storage on any fire department vehicle.

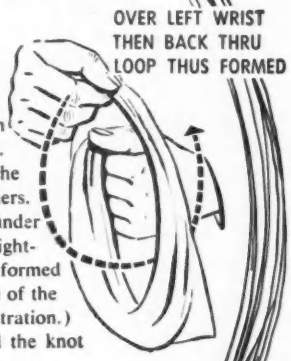


View of tank prior to inflation. To some extent it can be filled with water on sloping terrain.

(Left) Close-up of blower attached to tank valve. Each ring can be inflated in about one minute.

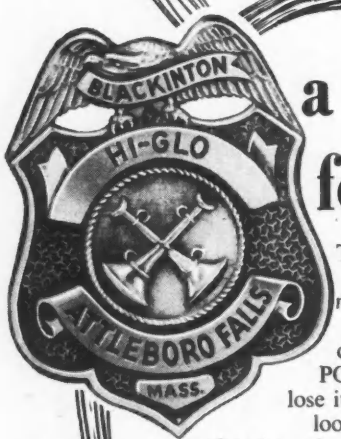
View of fully inflated tank. Note hose supplying water at right. Tank when inflated is four feet high.

a trick for your friends



Try this trick—it is one of the most deceptive of all handkerchief tricks. You have a handkerchief which is apparently tied in a knot, but the knot dissolves when you pull the ends of the handkerchief.

THE SECRET?—To tie the knot, hold the handkerchief by diagonally opposite corners. Loop the end held in your right hand under and then back over your left wrist. The right-hand end is next put thru the loop thus formed from the outer side, i.e., from the side of the loop away from the body. (See illustration.) Finally you pull the ends and the knot will vanish.



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Arson Investigators Seminar

THE Thirteenth Annual International Arson Investigators Seminar will be conducted at Purdue University, Lafayette, Indiana, April 29–May 3. The Memorial Union Building on the University Campus will be the site of the five-day training program.

This year's Seminar will feature lectures on arson, training for the "new enrollee," advanced investigative techniques, review of latest laboratory aids, and specific training for detection, apprehension, prosecution, and conviction.

IAFC Request

THE recently formed Committee on Volunteer Fire Departments of the International Association of Fire Chiefs would like to hear from volunteer fire chiefs on what they would like to see the Committee accomplish for volunteer fire departments. A questionnaire with this request will be mailed by the IAFC. The information should be sent to Chief Donald Holbrook, Administrative Chairman, Committee on Volunteer Fire Departments, 84 State Street, Boston 9, Mass.

John Arnold Retires

THE National Board of Fire Underwriters has announced the retirement of John H. Arnold, assistant chief engineer in charge of the NBFU Chicago office. He was replaced on March 1 by George Tatnall who has served with the NBFU since 1924.

Mr. Arnold is well known to many NFPA fire department members in the Midwestern States. Both he and Mr. Tatnall specialized in municipal fire protection problems. He has been a member of the Chicago Civil Defense and the Chicago Association of Commerce and Industry.

WANTED!

Aggressive distributors to sell nationally advertised line of fire helmets and other safety equipment.

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Deputy Chief Charles W. Bahme, in charge of LAFD Bureau of Personnel and Training, displays new uniform adopted for officers of Captain's rank and above. *(LAFD photo.)*

Los Angeles Changes Uniforms

AFTER a careful survey of its specifications for uniforms the Los Angeles, California, Fire Department, headed by Chief Engineer William L. Miller, has adopted new styles. Factors considered before the change were: whether the fire department clothing was up to date, efficient for the wearer, and of suitable availability.

As a result of the survey, the dress uniform coat has been discontinued for all members of the Department below the rank of Captain. Instead, a heavy dark blue shirt, matching the regular trousers will be worn. Department specifications also include a dark blue Eisenhower-type jacket worn optionally in cool weather. These changes became effective January 1.

Also adopted officially on that date were new specifications for uniforms for Captains and all Chief Officers in the Department. A 5-year time limit has been allowed to officer personnel to obtain their new uniforms. They will wear clothing identical to the U. S. Navy double-breasted 3-button (double row) midnight blue coat with matching trousers. LAFD buttons and braid, of course, will also be worn. Adoption of a single type of uniform for these officers is thus an advantage for Captains eligible for promotion.

The new uniform is shown above.

NEW "QUAKER 100" is made from extra-long staple cotton, chemically treated to keep its flexibility and reduce elongation.

NOW! 1½" DOUBLE JACKET MUNICIPAL FIRE HOSE IN 100-FOOT LENGTHS!

It's new "Quaker 100"—a 600 lb. hose. And it's quick drying, easy to pack and fold!

● ***It's light!*** One coupled length of "Quaker 100" weighs only 34½ lbs.

● ***It's strong!*** Specially treated cotton provides at least 10% more strength in each warp strand woven into the jacket. (Average burst pressure per three foot length is 1200 lbs.)

● ***It's quick drying!*** "Quaker 100" absorbs 25% less water than conventional 600 lb. dacron filler hose.

● ***It goes into action quickly!*** 100 feet long, "Quaker 100" reduces by 50% the danger of couplings pulling off or snagging.

SEE THE SAVINGS! See how easy "Quaker 100" is to use and maintain! Call your Quaker-Quaker Pioneer distributor today. For free brochure, write: *H. K. Porter Company, Inc., Quaker Rubber Division,* Philadelphia 24, Pa., or *Quaker Pioneer Rubber Division,* Pittsburg, Calif.

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The heart of the SUPER VACUUM Smoke Ejector is the patented propeller. Conventional fans produce a chopping, recirculating action. In contrast, the SUPER VACUUM propeller is a perfect spiral air screw which creates a vacuum... suction is created over the entire face of the propeller and the air or smoke is discharged in a high velocity spiral. There are no dead spots.
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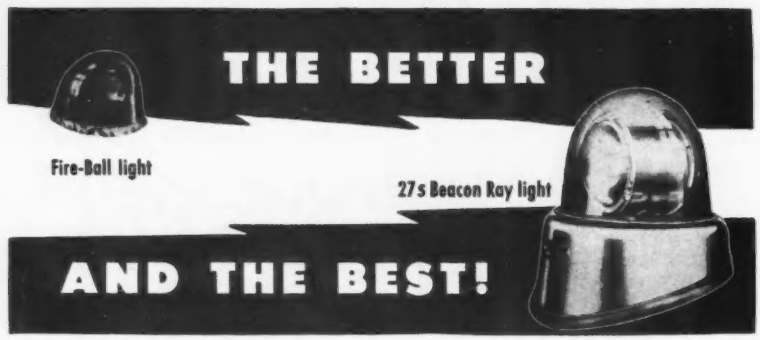

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It's better because of its light weight, compact size, superior design, greater durability and greater light output per dollar than anything approaching it!

We call it a better light because it's better than anything except the best!

The FEDERAL Beacon Ray is still the best light because of continually improved quality and design and because it is the brightest vehicle beacon! It provides the maximum where the maximum is needed.

The Fire-Ball light can do a lot for you if you are on a restricted budget and in many applications where the larger Beacon Ray might be impractical.

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Lessons from a Brush Fire

WITH the troublesome forest, grass, and brush fire season approaching, fire fighters might well consider an important fundamental of safe and efficient operations in outdoor fire combat. It is this: good, complete communications and prompt obedience to the "chain of command" are essential for safe and successful fire fighting operations.

A tragedy which occurred during the Inaja Forest Fire in California's Cleveland National Forest last November shows the importance of these fundamentals. During that fire, three U. S. Forest Service employees, a correctional officer, and seven inmates of San Diego County's Viejas Honor Camp died in an explosive flash fire in San Diego Canyon. A detailed report of this tragedy was recently published by the Forest Service, U. S. Department of Agriculture.

This particular fire fighting crew were working approximately 1,100 feet below the Canyon rim in a brush area consisting of chamise and sage brush of medium density (moisture content of the brush approximated the lowest ever measured for these species and was believed to be near the minimum possible). A crew boss in command of the scrapers which were building a fire line on top of the canyon climbed to a small bluff to observe the main fire which was burning approximately 1,000 feet below the crew in the canyon. He noticed that the fire suddenly gathered momentum and he immediately shouted a warning to the men below telling them to withdraw quickly.

Some men working in the canyon were able to withdraw in time, but the 11 victims were cut off when there was a "flash-over" of a large area of the canyon. It was reported that the "flash-over" simultaneously ignited approximately 40 acres of the brush. It apparently was caused by ignition of gases forced up the ravine by the extremely rapid run of the main fire.

While fire weather throughout Southern California during 1956 was unusually severe, climaxed by a

prolonged period of "Santa Anna wind conditions" (strong, dry winds from the desert area east of the coast mountains, flowing down through mountain passes and canyons to the sea), similar tragedies are not beyond possibility in other sections of the country. Fire department personnel who may have to engage in fire combat of forest and brush areas in the future should give serious consideration to the conclusions of the official U. S. Forest Service report of the Inaja Forest Fire, some of which are reprinted below:

A. *Fire behavior.* The disastrous flareup of the Inaja fire was caused by a critical combination of highly flammable fuels, steep topography, and adverse weather. The lull in the fire before and at the time of arrival of the night crews created a false sense of security, even though existing conditions of fuel, topography, and weather were critical.

B. *Crew location in canyon.* The men were taken down the line into the canyon owing to a lack of information to show possible danger from the fire in the canyon below. The contributing factors were:

(*a*) Absence of specific information on the fire status in San Diego Canyon available for the briefing at the base camp, due to poor conditions for aerial reconnaissance.

(*b*) Emphasis placed on the danger of the burning-out fire rather than on the main fire in the canyon below, when the day division boss briefed the night overhead personnel.

(*c*) Quiet appearance of the fire as viewed from the rim.

(*d*) The night overhead personnel had not seen the terrain in daylight.

(*e*) Lack of detailed scouting of the canyon on sector G during the day.

(*f*) Absence of contact with the bosses of the division across the canyon who had a different vantage point for viewing the situation.

C. *Trail location.* The location of the fire trail on the specific ridge where it was built instead of the next spur ridge up the canyon was questionable. The previous behavior of the fire and the position above and alongside a precipitous chimney made the chosen location hazardous.

D. *Burning out.* Sound fire fighting principles call for burning out the intervening fuels between the control line and the fire edge. The effect of the burning-out fire on the behavior of the main fire and on the planned escape routes is a vital factor influencing decisions on when, where, and how to burn out, and where to place men.

Fire behavior is not well enough understood to firmly establish the possible effect of the burning-out fire in sucking the main fire rapidly up the chimney at the site of the disaster. Other factors would have permitted the explosive run without the presence of the burning-out fire. Furthermore, the burning-out fire did not cut off the escape route.

E. *Lookout.* The crew cutting line into the canyon received warning to come out when a crew boss on the upper part of the line saw the fire heating up at a point below the men. It is uncertain in the Inaja fire disaster that a specifically designated lookout would have given the warning any sooner. However, it is vital that a lookout be designated when crews are in a potentially dangerous location.

F. *Water.* Exhausting the water supply from the tanker at the time of the flareup did not cause or contribute to the tragedy. The flames that raced up the canyon slope were of such height and were extended so far in advance of the burning fuel, that water available from one or several ground tankers would not have had a material effect.

G. *Personnel.* The leaders on the Inaja fire were capable and experienced. They were trained in accordance with recognized Forest Service standards. There is, however, need for more intensive advanced fire behavior training for key fire supervisory personnel.

Line crews on the sector where the tragedy occurred were experienced, trained

(*Continued on page 28*)

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Important Fire School Dates!

Alabama: The 21st Annual Alabama State Fire College will be held at University, June 3–7. Write to Director M. O. Hulsey, Assistant Supervisor, Public Service Training, Trade and Industrial Education, P.O. Box 1813, University, Alabama.

Arizona: The Prescott Fire Department, headed by Chief Jack Custer, will be host to the Thirty-First Annual Arizona State Firemen's Association Convention June 19–22. Prescott is reported to have the oldest volunteer fire department in the State of Arizona, and the Convention will feature hose cart races to commemorate the State's first organized fire brigade of 1877. Further information can be obtained by writing to Chief Custer, Convention General Chairman, Prescott Fire Department, Goodwin and Granite Streets Prescott, Arizona.

California: Fire Service Instructors Workshop, Fresno, May 13–17. Fire Investigation and Arson Seminar, University of California, Los Angeles June 10–14. Write to Director Tom S. Ward, Supervisor of Fire Training, State Department of Education, 721 Capitol Avenue, Sacramento 14, California.

Colorado: Colorado State Firemen's Convention and Fire School, Loveland, June 19–22. Write to Director A. L. Becker, Secretary, Colorado State Firemen's Association, 2224 South Stuart Avenue, Denver 2, Colorado.

Connecticut: The 3rd Annual Fire Officers' Conference will be held at the University of Connecticut, Storrs, April 11–12; the 3rd Annual Fire Marshals' Conference will be held at the University of Connecticut, Storrs, March 28–30 and April 11–12. Write to Director Roy W. Adams, Vocational Training Service, State Department of Education, 490 Capitol Avenue, Hartford, Connecticut.

Delaware: The 9th Annual Short Course for Firemen will be held at Camden-Wyoming, March 23–24 and 30–31. Write to Director Frank M. Forstburg, State Supervisor of Supervisory Training, 511 West Eighth Street, Wilmington, Delaware.

Florida: The Florida State Fire College at Ocala will hold two sessions of four weekly classes March 4 through March 30 and September 9 through October 4. Write to Director W. H. Barnett, Superintendent Florida State Fire College, Box 785, Ocala, Florida.

Georgia: The Georgia State Fire College at Atlanta will be held May 7–8. Write to Director Harry Phillips, 46 Courtland Street, S.E., Atlanta 3, Georgia.

Idaho: The Idaho State Fire School at Boise will be held in mid-June. Write to Director Chief Steve Taylor, Fire Department Headquarters, Boise, Idaho.

Illinois: The 33rd Annual State Fire College, University of Illinois at Champaign-Urbana will be held June 10–13. Regional Officers Schools at Jacksonville, April 1 to May 6 and Bellevelle, April 2 to May 7.

Iowa: The 33rd Annual State Fire School will be held at Iowa State College, Ames, June 18–21. Write to Director Keith Royer, Supervisor Firemanship Training, 110 Marston Hall, Iowa State College, Ames, Iowa.

Kentucky: The Kentucky Fire School will be held at the University of Kentucky, Lexington, June 4–6. Write to Director John L. Thompson, Assistant Manager, Kentucky Inspection Bureau, 940 Starks Building, Louisville 2, Kentucky.

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On-the-spot power for floodlights, tools, rescue trucks, civil defense

Model 1.5M25, *1500 watts, 115 volt AC. Manual starting. 2500 watt AC portable models also available.*

Volunteer and municipal fire departments use compact, smooth-running, portable Kohler electric plants to speed fire-fighting and rescue work. Kohler 1500 watt model provides ample power for floodlighting night fires—also pumpers, smoke eradicators, resuscitators, power tools for rescue operations. Has 4 receptacles, pilot light, double carrying handle. Rubber-tired hand cart available. Other models, 500 watts to 50 KW include stand-by models to maintain sirens, alarm signals, communications during power failure.

For civil defense portable Kohler plants operate floodlights, sound amplifiers, power tools, X-ray units for mobile hospitals, and rescue truck equipment. Larger sizes for air-raid sirens. Stand-by models for panic or evacuation centers. Write for folder 12-C.

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Michigan: The 29th Annual State Fire College will be held at the University of Michigan, Ann Arbor, June 25–28. Write to Director Francis Hartman, Supervisor, Firemanship Training, 4524 Administration Building, Ann Arbor, Michigan.

Minnesota: Minnesota State Fire School will be held at the University of Minnesota Farm Campus, St. Paul, April 22–26. Write to Dr. J. O. Christianson, Director of Agricultural Short Courses, University of Minnesota, St. Paul 1, Minnesota.

Mississippi: The Mississippi State Fire School will be held at Mississippi State College, Starksville, June 24–28. Write to Director J. I. Fetters, Administration Assistant, University of Missouri, Room 101 Building T-11, Columbia, Missouri.

Missouri: The 21st Annual Central Missouri Fire Conference will be held at the University of Missouri, Columbia, July 26–28. Write to Director J. I. Fetters, Administration Assistant, University of Missouri, Room 101 Building T-11, Columbia, Missouri.

Nebraska: The 20th Annual State Fire School will be held at Grand Island, May 5–7. Write to Director Otto B. Johannes, Chairman, Fire School Committee, 2604 12th Street, Columbus, Nebraska.

Nevada: Nevada has no state fire school but does have an Itinerant Firemanship Instructor. Write to Director F. I. Wallace, State Supervisor Trade and Industrial Education, Carson City, Nevada.

New Jersey: State Fire College Division of New Jersey State Safety Council. Newark, Merchantville and Sea Girt. Spring Lecture Sessions: Merchantville, March 26, April 2, 9, 16 and 23. Newark, April 3, 10, 17, 24 and May 1. Fall outdoor training sessions at Sea Girt. Write to Deputy Chief John P. Weeks, 804 Quackenbush Boulevard, Sea Girt, New Jersey.

North Carolina: State Fire College and Pump School, Charlotte. Write to Director Charles L. Burkett, Fire Department Headquarters, Salisbury, North Carolina.

North Dakota: The State Fire Officers' Training School will be held at the State Teachers College, Minot, March 18–20. Write to Director, Chief Gilbert C. Malek, Fire Department, Minot, North Dakota.

Oklahoma: The State Fire School at Stillwater, April 22–26. Write to Director R. J. Douglas, Head Fire Protection Department, Oklahoma A & M College, Stillwater Campus Fire Station, Stillwater, Oklahoma.

South Carolina: State fire training service given by itinerant instructor in local classes. Write to Director Clarence A. Fischer, Orangeburg, Itinerant Instructor H. B. Wells, 1539½ Harrington Street, Newberry, South Carolina.

South Dakota: The State Fire School at Mitchell, June 3–7. Chairman Robert Hanigan, Secretary, State Volunteer Firemen's Association, Box 423, Pierre, S. Dak.

Texas: The Fireman's State Training School will be held at the Texas A & M College, College Station. Write to Director Henry D. Smith, Chief Firemen's Training School, Engineering Extension Service, A & M College, College Station, Texas. The Texas Arson Conference, sponsored by the Dallas County Fire Chiefs' Association, is scheduled to be held at the Baker Hotel in Dallas, April 10–12. For further details write to Manager Hal H. Hood, Texas Arson Conference, Dallas County Fire Chiefs' Association, Room 420, Court House, Dallas, Texas.

Vermont: The State Firefighters' Training School at Northfield and Brattleboro starts March or April and continues 15 weeks. Write to Director Francis D. Walker, 106 South Street, Bennington, Vt.

Washington: The Annual State Firemen's School will be held at Spokane, July 11–13. Write to Secretary Emma Ethier, State Firemen's Association, 200 Fifteenth Avenue, Seattle 2, Washington.

West Virginia: The State Fire School will be held at Morgantown, July 22–26. Write to Director R. E. Hanna, Jr., West Virginia University, Morgantown, W. Va.

Better Hose Care with CIRCUL-AIR
HOSE CONDITIONING EQUIPMENT
WASHERS • DRYERS • TURN-TABLES • STORAGE RACKS

NEW Roto-Jet HOSE WASHER AUTOMATICALLY WASHES — RINSES — DRAINS HOSE

ROTO-JET Washes, Rinses, Drains hose thoroughly and quickly. Hose is self-propelled. Simple, one-man operation. With or without detergents, ashes, dirt, mud and sludge are automatically scrubbed out and flushed away. Saves time. Lengthens hose life. Now . . . with Foot Pedal Operation.

FIRE HOSE DRYER

The patented, electrically operated Circul-Air hose dryer circulates prewarmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life. No other drying method is so fast — so economical — so easy to use. Circul-Air is the preferred drying method in over 4,000 leading Fire Departments.

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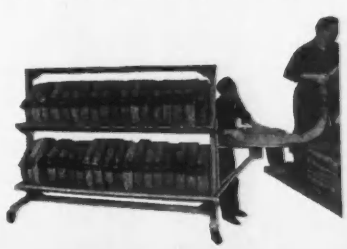
Approved by Underwriters' Laboratories . . . and Canadian Standards Association. Recommended by all leading fire hose manufacturers.

PORTO-RAK HOSE STORAGE AND LOADING UNIT

Saves valuable space. Holds 1800 ft. of 2½" hose — proportionately more of 1½" — in an 8 ft. space (when loading table is detached). Roll it right up to the truck for complete hose reload — out of the way when not in use. Equipped with locking fiber-wheeled casters.



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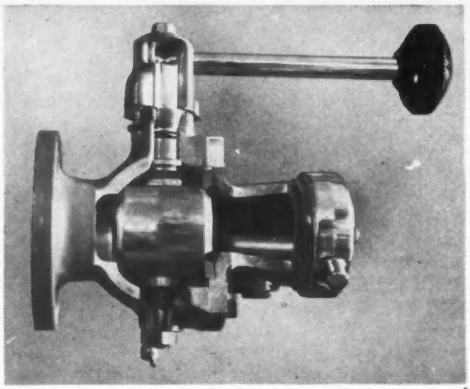
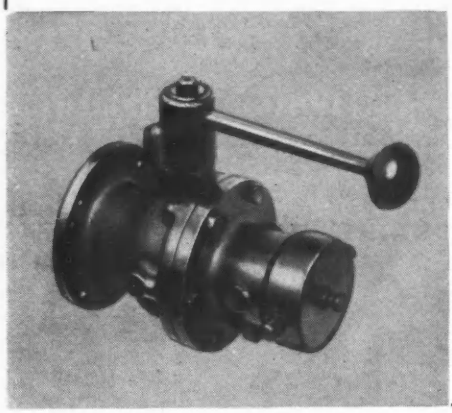
Discharge Valve

This popular HALE ball-type BL Valve is not only furnished on new HALE Pumps, it is also available for easy installation on ALL Hale Fire Pumps now in service, regardless of age.





Above — View of BL Valve cut away to show internal construction. Valve is in open position with cap on.

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*Made with 100% DuPont Neoprene

Lessons from a Brush Fire

(*Continued from page 25*)

fire fighters. Moreover, on this sector there were experienced overhead personnel from the local forest and from other forests.

To provide information which would be particularly useful to community fire departments, the Forest Committee of the National Fire Protection Association last year prepared a memorandum NFPA No. 295-M "Community Organization and Equipment for Fighting Forest, Grass, and Brush Fires." This illustrated, 80-page, 4¾-in. by 7¼-in. paper bound pamphlet presents basic principles of organization and fire fighting in wooded and grass areas. It discusses techniques of organizing fire crews, establishing a chain of command, building fire lines, and using other methods for control of fire in such areas. It also devotes considerable space to describing the type of equipment available for forest, grass, and brush fire fighting. Copies of the booklet are available for $1.00 each from the NFPA Publications Department, 60 Batterymarch Street, Boston 10, Massachusetts.

For Child Fire Safety Campaign

THE NFPA Public Relations Department has prepared a useful packet for fire departments who want to develop special campaigns on fire safety for children. The packet contains fourteen items which will be especially helpful in developing publicity in local newspapers, radio and television stations. There are seven typical news releases which only require the insertion of the names of the fire chief and fire department; three pages of radio and TV spot announcements which can be put to similar use; a suggested five minute talk on unattended children; fire safety suggestions for parents and baby sitters; an emergency telephone number card; a reprint of "Some Tips on Teaching Baby Sitters" featured in the January, 1957, issue of FIREMEN and other practical materials.

The packet can be obtained at no cost by writing to the NFPA Public Relations Department. Ask for the "Program Kit For A Community Child Fire Safety Campaign."

News about Sparky

In Walla Walla, Washington, little Susan Patrick shows fire fighter Charles McDonald a scrapbook about her city. The book is being sent to Vice President Nixon's children who were made honorary Sparky Fire Inspectors by Susan during a recent visit to Walla Walla. Fire fighter McDonald is Secretary of the Walla Walla Sparky Committee.

In Alameda, California, under the guidance of Lt. George Davies of the Alameda Fire Department, Sparky works not only for fire prevention, but he helped out through the month of January with the National March of Dimes drive. Special scripts were recorded for this project, and the Sparky talking manikin appeared in stores, banks and offices throughout Alameda. He is pictured above with Lawrence Stickney (left), manager of the First Western Bank, and Lt. Davies in the lobby of the bank. Next project on Sparky's busy schedule is a series of lectures to industrial fire brigades.

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A Captain Takes the "Last Ride"

A REUNION of seven retired Los Angeles City firemen ended tragically January 20 in Hollywood, California.

Captain Ira Carpenter, 77, one of the L.A.F.D.'s oldest living members, died at his North Hollywood home shortly following his appearance with his buddies on the "You Asked For It" television program. He joined the department October 1, 1910 and retired February 29, 1932.

Captain L. L. Jadwin, now living in Benicia, Calif., had requested the ABC-TV network show for a "last ride on the old horse-drawn rig with his buddies who worked at old Station 3 on Hill St. in 1912." The program's researchers, working with the Los Angeles Fire Department, found 10 of the 24 men stationed on Truck 2 and Engine 3 in 1912 still alive. Seven, including Captain Carpenter, agreed to attend the reunion, held on the stage at ABC-TV Center in Hollywood.

Captains Jadwin, Carpenter, E. L. Beeson, Harry Griffin, Charles O'Neil, Batt. Chief Ernest Rhodes and Auto Fireman Harry Claiborn — all long retired from active service — exchanged tales of fire fighting in the City of the Angels after the turn of the century.

Then with Art Baker, host-emcee of the program at their side, the old-timers climbed aboard the 1881-vintage hosewagon provided by the L.A.F.D., loosened the reins and went for that "last ride."

Captain Carpenter left the studio at 8 P.M. and at approximately 11 P.M. a L.A.F.D. rescue squad arrived at his home, but failed to revive him. It is believed the retired officer died of a heart attack.

Captain Carpenter, who died after the "last ride" with his friends, is standing next to Art Baker (civilian clothes) at left of tailboard.

Bouquet to New York

ON JANUARY 25, NFPA General Manager Percy Bugbee presented a scroll to Mayor Robert F. Wagner of New York City. This scroll expressed the congratulations of the officers and directors of NFPA to the New York Fire Department for its inspection program which has reduced the number of fires in New York City by more than ten thousand in the past two years.

The photo below shows Mr. Bugbee making the presentation to Mayor Wagner. Directly behind the scroll is Fire Commissioner Edward F. Cavanagh, Jr. and on the Mayor's right is Chief Connors. Chief of the Fire Prevention Division Arthur Massett is on the extreme left and Fire Marshal Martin Scott is second from the right. Others in the group are senior fire officers and honorary deputy chiefs of the Department.

New Chief in Cincinnati

DAN F. VOGEL will succeed Barney J. Houston as Chief of the Cincinnati, Ohio, Fire Department on April 1. Chief Houston is retiring after 41 years of service as head of the Department.

Chief Vogel who has been serving as Assistant Chief of the Southern Division recently topped a promotional examination for the position as head of the Department. He joined the Cincinnati Fire Department on October 16, 1933. Four years later he was raised to Lieutenant, in 1939 to Captain, to Marshal in 1943, and to Assistant Chief in 1951.

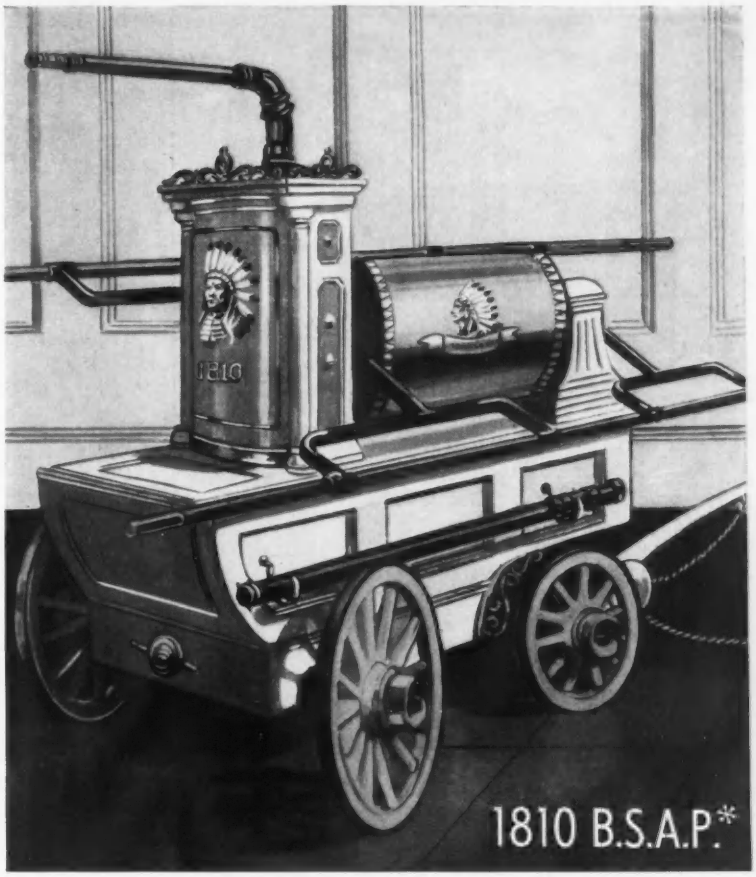
Gold Medal Award

THE Hartford, Connecticut, Fire Insurance Company Group is sponsoring a new series of awards in connection with its Junior Fire Marshal Program. Gold medals will be presented to boys or girls who have performed outstanding acts in connection with fire safety.

Any fire chief may nominate children for these awards; also eligible are those children whose interest and activity in fire prevention is worthy of national recognition. Award winners will be selected by an independent committee of nationally known fire and safety authorities.

Other requirements are that the child be a pupil in one of the first eight grades of school and that the safety action must have taken place on or after October 7, 1956. The child does not have to be a Junior Fire Marshal. Nominations may be made by addressing a letter to Awards Committee, Hartford Fire Insurance Company, Hartford 15, Connecticut. Letters of endorsement, photographs, or newspaper clippings will be helpful but are not required.

Not recommended!



WHEN BREATHING PROTECTION EQUIPMENT *Was a Wet Blanket!*

Back in 1810, fire engines, like the man-powered job shown above, were only a short step ahead of the bucket brigade. Then, breathing protection equipment was a piece of wet blanket wrapped around the head, over nose and mouth.

Today's modern fire fighting methods include the lifesaving Scott Air-Pak that enables fire fighters to enter dense smoke and chemical fumes with complete breathing safety. The new Scottoramic Mask increases confidence. It affords unlimited vision in all directions to help firefighters keep out of danger zones.

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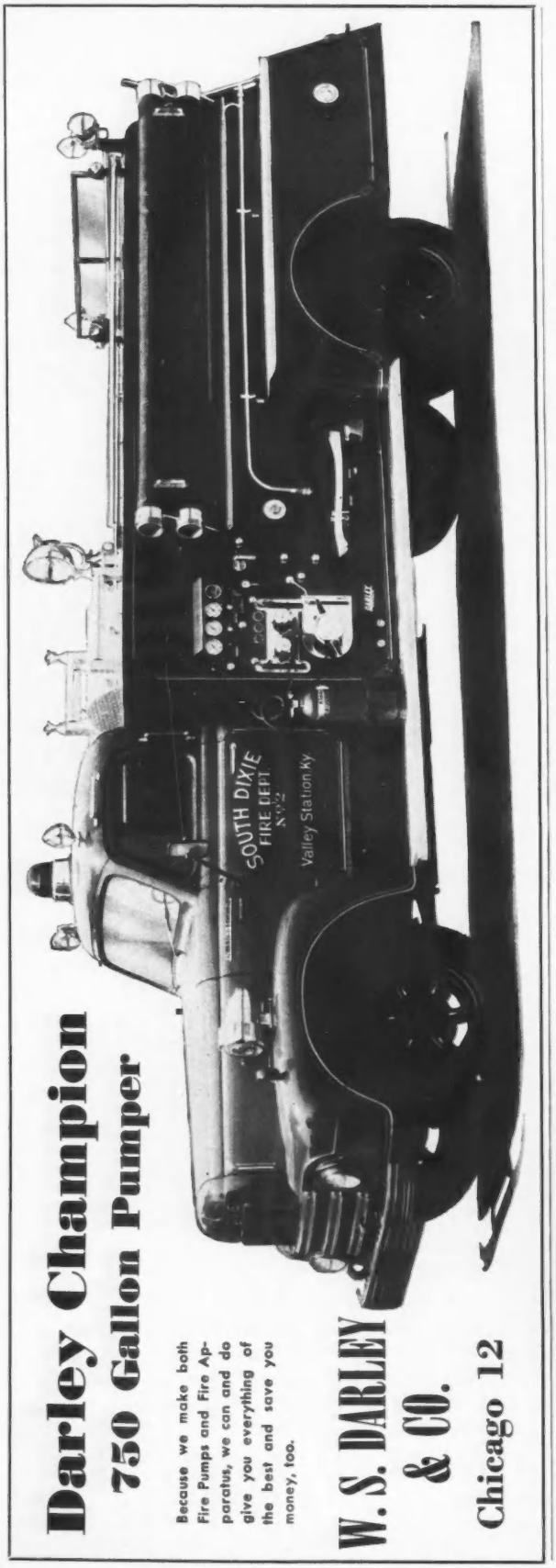

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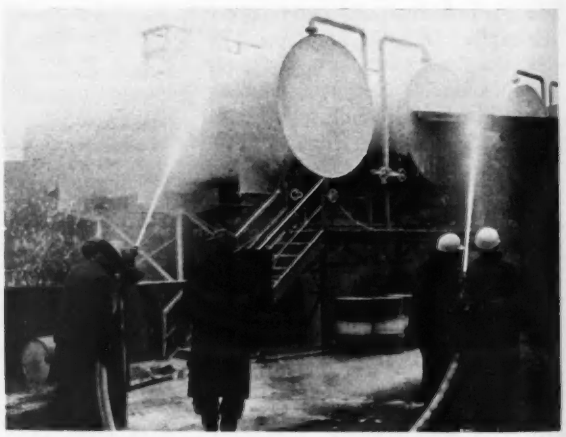
Industrial Mutual Aid Seminar

IN the Kanawha Valley of West Virginia, where Charleston and a number of other cities are located, there is an Industrial Emergency Planning Council. Its membership includes twenty-nine plants of important industries, of which Carbide, DuPont, and Esso Standard are representative.

In January the Kanawha Valley Industrial Emergency Planning Council, in cooperation with the Industrial Security Institute, was host to nearly one hundred industrial plant people from other parts of the country who participated in a two-day Seminar on Industrial Mutual Aid. Much of the work in setting up the Seminar was done by the Industrial Security Institute which has offices at 475 Fifth Avenue, New York 17, New York. Several members of the NFPA Industrial Committee attended and participated in sessions of the Seminar program which was chairmanned by Arthur P. Dunlap of Carbide and Carbon Chemicals Company, who is a member of the NFPA Industrial Committee.

The Kanawha Valley Industrial Emergency Planning Council has been a formal organization since 1952 but its work started several years earlier. The Kanawha Valley industrial complex is such that an emergency in any plant is likely to require cooperative action by the twenty-nine principal plants, by fire and police departments of some fourteen municipalities and other important agencies, including the West Virginia State Fire Marshal's Office and the West Virginia State Police.

The general emergency scheme followed is for the fire department forces to take charge of the immediate



Industrial plant protection men attending the Seminar were shown how plant and public fire and police and other agencies mobilized to deal with a plant emergency, which was assumed at a small tank farm of the Carbide and Carbon Chemicals Company plant. This demonstration merely put into effect the same measures which would be followed in a real emergency in accordance with plans developed by the Kanawha Valley Industrial Emergency Planning Council.

Public fire departments responded in accordance with a prearranged plan, and state and municipal police agencies set up a traffic pattern for the entire district to expedite movement of the personnel and emergency vehicles.

area of any fire, explosion, flood or other emergency. In the larger plants, the plant fire department is in charge of the immediate operations for dealing with the emergency. In such cases, outside municipal fire departments may play a supporting role, but in any case this is considered a matter of preplanning. All fire forces responding understand where they should go to work and what they should do.

The police forces deal with the immediate perimeter of the emergency area. It is their responsibility to see that authorized persons and equipment get in and out of the emergency area. Plant police are in charge inside plants, municipal police outside, with state police co-ordinating traffic operations.

The definition of these two major spheres of command is a notable contribution to the techniques of dealing with an emergency. The traffic pattern in the Kanawha Valley forced a decision on this problem. The Valley is a long, narrow area on both sides of a river, a situation in which direction of traffic by police in emergency plays an unusually important part. There has been felt to be no need for over-all command for an emergency in the ordinary sense, because with fire forces at the emergency and police forces in perimeter areas, no additional questions of command come up.

The visitors attending the Seminar were given an unrehearsed demonstration of how these arrangements work, and other features of the Kanawha Valley emergency scheme were explained. The Seminar provided an opportunity for discussion of public relations, traffic and other problems of handling an industrial plant emergency, and outlined some features to be included in a general guide on the subject for use by industry elsewhere.

Reports were heard on industrial mutual aid schemes at four other industrial centers, West Hudson County and Linden, in New Jersey, Baton Rouge, Louisiana, and Texas City, Texas. The West Hudson Council includes eleven industrial plants in Harrison Township, New Jersey, which have had an active program since 1950. The Linden, New Jersey, Mutual Aid Council is more recent but also includes eleven plants. The Baton Rouge program dates from 1943 and was tested by operations during a 1945 hurricane and a levee break in 1953. It has thirty-two industrial members. The Texas City Mutual Aid System is a comprehensive organization of industries and public agencies in that area.

The Seminar revealed that there were a number of other industrial mutual aid schemes in various stages of development in different parts of the country. Most of these programs were motivated by experience with one or more serious disasters. These disasters brought out the advantages of industrial mutual aid councils to provide exchange of information and to work out the details of dealing with emergencies. It was apparent that three or four industrial plants with a common interest could start a mutual aid program. Public fire and police departments welcomed the interest of industries in these matters. If the operating procedures were properly worked out around the conference table, matters of apparent competition between protective agencies proved to be relatively nonexistent.

The success of the Seminar at Charleston is likely to lead to other meetings in locations where groups of persons concerned with industrial mutual aid can get together conveniently for discussion.

During the demonstration, top management representatives turned out just as did the fire and police forces. Mr. F. H. Belden, superintendent of the Carbide plant, the site of the demonstration, is shown (white helmet) at the emergency truck which provides a communications center and command post. With him is Horatio Bond, NFPA Chief Engineer, who spoke at the Seminar.

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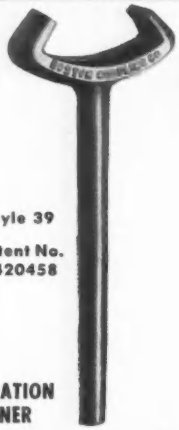

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Carry just one spanner. Fits 1½", 2" and 2½" pin lug, rocker lug, roll pin and slotted couplings. Available in satin finish aluminum or cadmium plated malleable iron.

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Screw stem type — the clicking feature in this gate eliminates broken stems and bent discs, the major repair items on screw-type gates.

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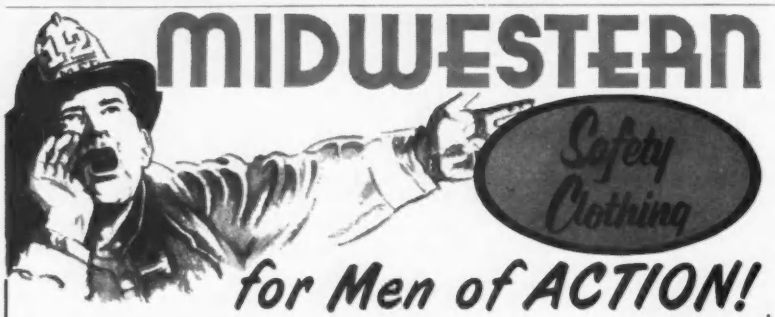

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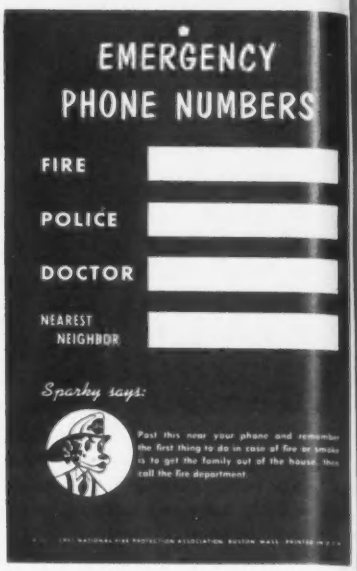
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Sparky says:
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Useful Card for Emergencies

THE NFPA has just published this new emergency telephone number card, which should be particularly useful to fire departments planning dwelling inspections and other community campaigns. Shown above in its bright red color, the 5½ x 8½ card was prepared especially to be posted in the vicinity of telephones in homes, offices, industrial plants, mercantile establishments and places of public assembly. It is a simple matter for the homeowner, merchant or any other person to look up these important telephone numbers, mark them clearly in the appropriate places, then hang the card in a prominent position near the telephone. The card will be included in the special kits for instruction of baby sitters, now available from the NFPA Public Relations Department.

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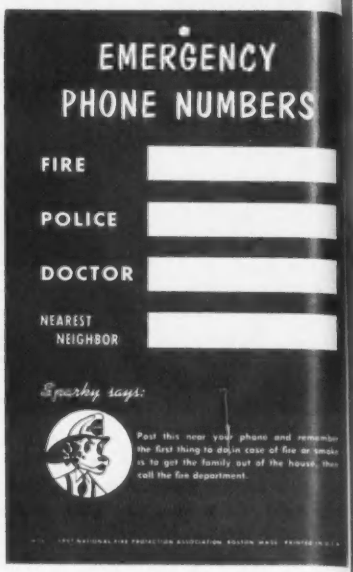
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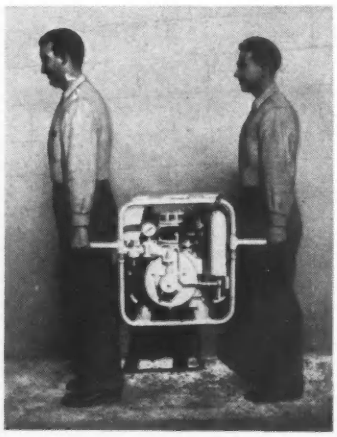

Above — Frame-mounted FZZ can be easily carried by two men. It is also available mounted on rubber cushioned steel channels, or on two truck-type wheels.

Fire Companies frequently write us telling of the many practical ways they use their portable Hale type FZZ, such as the following:

- For fighting field or forest fires from moving trucks.
- For "wetting down" and standby use, thus releasing major equipment.
- For pumping out flooded cellars and elevator shafts after fire, flood or other emergency.
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The FZZ will supply from draft two capable fire streams through 1½-in. lines. Performance substantially exceeds NBFU and NFPA capacity and pressure requirements.

Note: Discharge Adapter can be supplied for use with 2½-in fire hose.

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Fire Pumps in All Standard Capacities

Fire Brigade Activities in Kuwait, Arabia

IN RECENT months, some interesting correspondence has been received from Chief Ali Abdul Razzak Saleh who commands the Fire Brigade of Kuwait, Arabia. In his first letter Chief Saleh reported a series of mysterious fires which occurred in Kuwait and are still unsolved. In subsequent correspondence he described the organization and equipment of his Fire Brigade and expressed the hope that the information would be passed on to the readers of FIREMEN. Accordingly, Chief Saleh's remarks are summarized on these pages.

Last Fall the Kuwait Fire Brigade answered a number of alarms for an unusual series of fires. On responding to the first alarm, the fire fighters entered a dwelling and found that small fires had occurred simultaneously in four rooms of the house. After they completed extinguishment and were preparing to return to quarters, they inspected the building to make sure that there was no possibility of another outbreak of fire under normal circumstances, but fire unaccountably broke out in the kitchen.

It was immediately assumed that the fires had been set, and the Kuwait police officers were called. However, as the police were carrying out their investigations, smoke appeared from the inside of a closed cabinet, from a closed steel trunk, and from a leather suitcase, all within the building.

Chief Saleh reports that this incident was followed by a number of other fires of similar nature in different buildings. After considerable investigation, it was determined that the fires all occurred in the vicinity of a certain woman. However, despite close observation of this woman's activities by both police and fire brigade members, small fires continued to break out in the buildings which the woman visited during the next few days. The woman, her family, and servant were all placed under observation. Chief Saleh reports that the fires were finally prevented by "evacuating the lady to an open place where she was kept under strict guard." Since then no "mysterious" fire has occurred but the matter is still under investigation.

(*A number of years ago a fire department in one of the Midwestern States experienced a similar situation, but investigation eventually proved that the fires were of incendiary nature. — Ed.*)

At the present time the Kuwait Fire Brigade has 280 members and 5 fire stations, but an expansion program is being considered. Chief Saleh states that the Brigade's apparatus now includes 6 pumpers mounted on Studebaker truck chassis, 12 Dennis fire trailer pumps, 2

(*Left*) One of the fire stations of the Kuwait Fire Brigade showing some of the pumpers and tank trucks.

Shown at Fire Station No. 4 are W. T. Martin, Kuwait Airport Fire Officer; Chief J. A. Booker of the Ministry of Transport and Civil Aviation, London, England; and Chief Ali Abdul Razzak Saleh, who commands the Kuwait Fire Brigade.

Mack tank trucks fitted with hose reels and carrying trailer pumps, "plus a big fleet of tankers, jeeps, and pick-up trucks." Most apparatus is equipped with two-way radio.

The Brigade has recently opened a special fire training school in which all new members must undergo a probationary training course of three months. After passing examinations, they are then reassigned to specific duties.

The Brigade has ordered four new 1500 gpm pumpers featuring Waterous two-stage centrifugal pumps mounted on Crown chassis. Some Kuwait apparatus is shown in the photo on the opposite page.

Almost Fifty Miles of Ladders

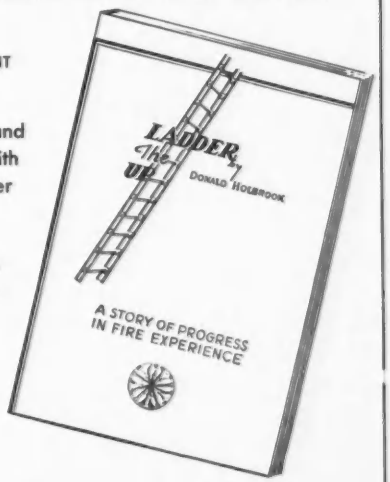
AS WE have observed before, the Boston Fire Department is noted for the excellence of its ladder companies. It is interesting that, in fire fighting operations last year, the Department's 30 ladder companies raised well over a quarter-million feet of ladders. Aerials were raised at fires 1,925 times totaling 161,955 ft. of elevation. Ground ladders were raised a total of 95,362 ft. The company using the aerial the most was Ladder Company 13 which raised the "big stick" 201 times and alone accounted for 22,036 ft. of ladders raised. Ladder Company 4, while third in total footage, raised 8,652 ft. of ladders manually for first place in use of ground ladders.

It takes a lot of muscle for one company to put up better than a mile and a half of ground ladders. Can any other fire company top this record?

UP THE LADDER

by DONALD HOLBROOK

CHIEF, MEADOWOOD FIRE DEPARTMENT
CHESHIRE COUNTY – AREA N. H.



A "bell ringer" for Mutual Aid and County Area fire organization with record of author's own volunteer group.

A lifetime story of experiences with professional and volunteer fire departments, with an introduction by Chief Thomas J. Collins, New Haven, Connecticut, Fire Department.

Net proceeds from sale of book go towards Meadowood's proposed new assembly hall available to the Fire Service.

A Paper Cover Volume 6 x 9 inches
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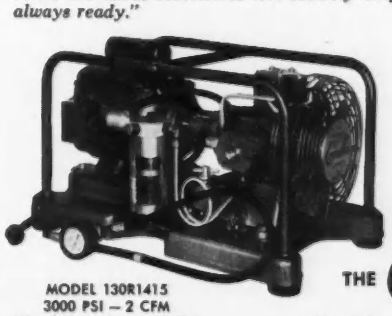
From one chief to another . . .

CHIEF LUKE J. BERGAN, AUBURN, N. Y., SAYS:

"I would recommend the Cornelius Air Compressor to all Fire Departments using demand masks"

Chief Bergan adds: *"The Cornelius Air Compressor is all that it is advertised and we are very pleased with it. Before purchasing one we had to send away for refills and wait several days for return of the cylinders. Now when our tanks are used, sometimes not entirely empty, we refill them and they are always ready."*



MODEL 130R1415
3000 PSI – 2 CFM
Weight complete – 95 lbs.

There is no substitute for an abundance of pure, fresh air for prompt, effective fire fighting. Write today for FREE Cornelius portable compressor catalog or call your fire equipment distributor for a demonstration. Find out why Cornelius compressors are recommended by fire chiefs everywhere.

THE Cornelius COMPANY

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Training Films

A new 16 mm. sound, color motion picture film "Hold That Line — with Dirt," made in cooperation with the Forest Service, U. S. Department of Agriculture, is announced by Fire Fighting Films, 414 Mason Street, San Francisco 2, California. Prints are available for $75 each.

Also available from the same film distributor is the motion picture film "Care and Maintenance of Fire Hose." This may be obtained on a 3-year lease plan at $25 per year. For additional information write to the above address.

High-powered Floodlight

Stonco Electric Products Company, 333 Monroe Avenue, Kenilworth, New Jersey, has announced a new high-powered portable floodlight. It weighs only 13 pounds complete with a 2,000-hour spot or flood light, 25 ft. of detachable 3-conductor cord with plug or adapter, and protective lens with guard. Manufacturer claims that it will produce 121,500 candlepower with a 500 watt rating, and that the heavy duty construction is rustproof, corrosion-proof, cast aluminum with heavy internal and external cooling ribs. Natural aluminum finish is featured on the standard model, while the portable unit, designed for fire department use, has a brilliant red finish. The floodlight unit is available as a portable or truck mounted model, with both types adjustable for any direction. Write to the manufacturer at the above address for illustrated Bulletin No. 148.

All-Yellow Safety Coat

Midwestern Safety Manufacturing Company, Mackinaw, Illinois, has announced a new all-yellow safety coat as an addition to its line of clothing for fire fighters. The new coat is made of "Vanitex" rubber fabric material, which, the manufacturer states, stays soft and flexible in extreme heat and cold and resists acid. The coat features a 6-in. fly front, rubberized wristlets, and five safety snaps on the front. There is also a large inside pocket. For complete information and samples of the material write to the manufacturer at the above address.

Pressurized Extinguisher

Ansul Chemical Company, Marinette, Wisconsin, is now manufacturing a pressurized water extinguisher. It has a 2½ gallon capacity and has been listed by Underwriters' Laboratories, Chicago, Illinois, for use on Class A fires. According to the manufacturer, the water stream from this extinguisher has a range of 35 to 40 feet. After use, recharging is made by pressurizing the unit to 100 psi with any source of compressed air. A tri-color gauge indicates whether sufficient pressure is present in the extinguisher for effective operation. The extinguisher is available in three shells at the following prices — stainless steel $47.00; brass $56.60; and chrome plated brass $64.60. Write to the manufacturer for additional information.

N-R-N-R-N-R-N-R-N-R

MONEY CLIP BADGES

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For any type of badge and for any purpose, whether conventional or money clip type, see the NIELSEN-RIONDA line.

No longer is it necessary to fumble with pins and catches. Our BADGE and MONEY-CLIP combination attaches without effort to belt, shirt or coat pocket. Its flat construction reduces bulkiness when placed in a wallet or case.

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CANCER'S SEVEN DANGER SIGNALS

1 Unusual bleeding or discharge

2 A lump or thickening in the breast or elsewhere

3 A sore that does not heal

4 Persistent change in bowel or bladder habits

5 Persistent hoarseness or cough

6 Persistent indigestion or difficulty in swallowing

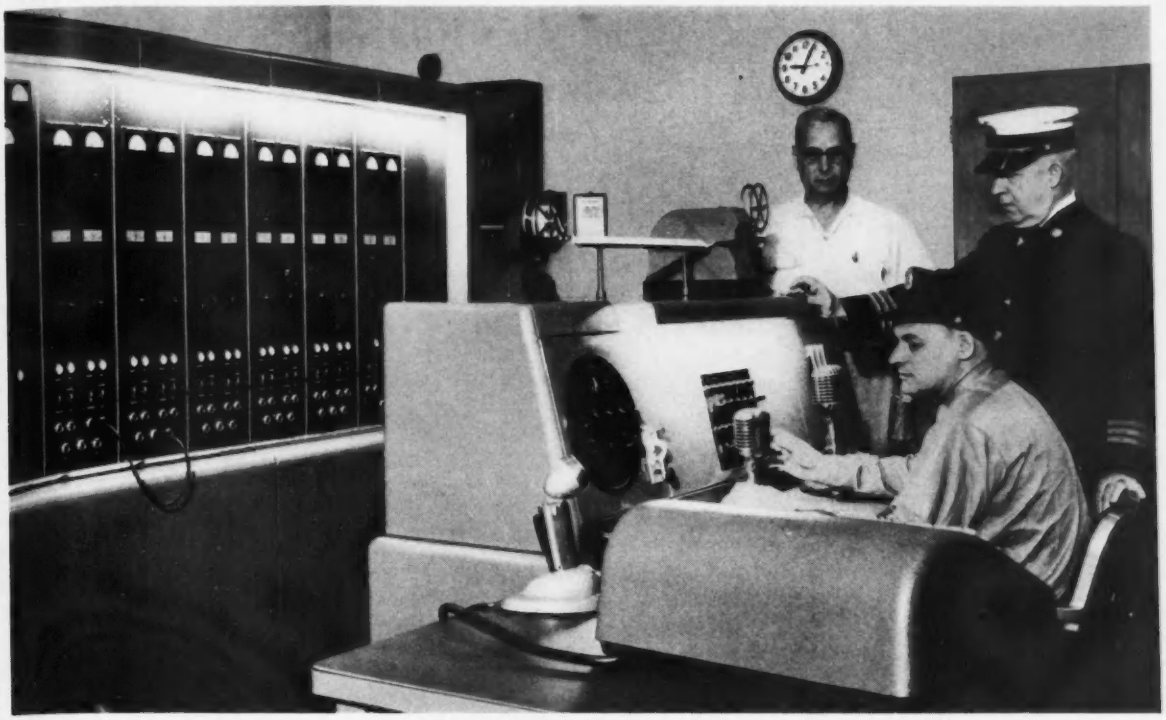
7 Change in a wart or mole

None of these symptoms necessarily means that you have cancer but any one of them should send you to your doctor! Cancer is usually curable when detected and treated early.

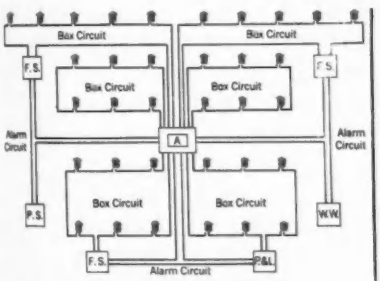
REMEMBER THE DANGER SIGNALS! FIGHT CANCER WITH A CHECKUP ... AND A CHECK

AMERICAN CANCER SOCIETY

Lancaster, Pa., Reports...



New Automatic Alarm System Speeds Response to Alarms — Gives Extra Protection to Citizens



New equipment consists of . . .

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Voice Communication Equipment between central office and outside Fire Stations.

FIRE FACTS **Gamewell Type B Fire Alarm System** is completely automatic. Box circuits go to Central Alarm Station from where Alarm Circuits connect Fire Stations and all important Emergency Centers. Recording devices, and audio and visual alarm signals are furnished as required.

Remember-a Gamewell System is FIRST when seconds count!

A new Gamewell Type B, Form 4 Automatic Coded Telegraph Fire Alarm System is now on the job in Lancaster, Pa. It gives Chief Harry Miller a big edge in protecting life and property against the hazards of fire in his community.

Here's how...

At the instant a fire box is "pulled", coded signals are automatically transmitted to Fire Headquarters, and immediately retransmitted to all engine houses, the water department, police department, power and light plant and the fire chief's home — all simultaneously.

Result...

The entire fire defenses of Lancaster are mobilized within seconds . . . automatically. Men and equipment get to the scene during the vital first seconds of the emergency. The citizens are assured of the most effective fire fighting possible.

Ask for ALL the Facts

Gamewell experience with all types of fire alarm and signalling systems can help your community plan for maximum fire defense. A special FACTS KIT is available to answer questions on fire alarm systems and Gamewell will be happy to conduct a FREE Survey to assist you in planning. Write or call . . .

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. . . a 1,000 gpm pumper built on a modern, dependable commercial truck chassis

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First, it's equipped with the well-known Barton-American Duplex-Multistage centrifugal pump of *proven* design and performance.

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Third, this truck includes the major engineering advantages and exclusive features that make American Fire Apparatus famous. For operating ease, great fire-fighting effectiveness and minimum maintenance, this combination is unequalled!

Call on American—where you select the chassis you want—the body style you want—with either midship or front-mounted pumps—and many other features to suit your community's needs.

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WESTERLO, N.Y.

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If you were asked to name a famous fire hose reel, we believe your first reply would be, "Hannay" Isn't that so?

There are many reasons why Hannay Hose Reels are so well and favorably known and, here again, we feel sure you could tell why. Their ruggedness and dependability would probably head the list. The service and convenience features such as their heavy duty motors, their leak proof swing joints, their tru-circle drums and quiet positive chain and sprocket drives would also be high on your list.

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Just this. The only way you can get all the dependability and features Hannay Reels give, is to be sure you specify and get genuine Hannay Fire Hose Reels.

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Sincerely,

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